1994

1994 Agriculture Outlook & Policy Issues

University of Nebraska Agricultural Economics Department

Lynn H. Lutgen Compiler
University of Nebraska - Lincoln

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Agriculture Outlook & Policy Issues

Agricultural Economics Department

Coordinated by Lynn Lutgen

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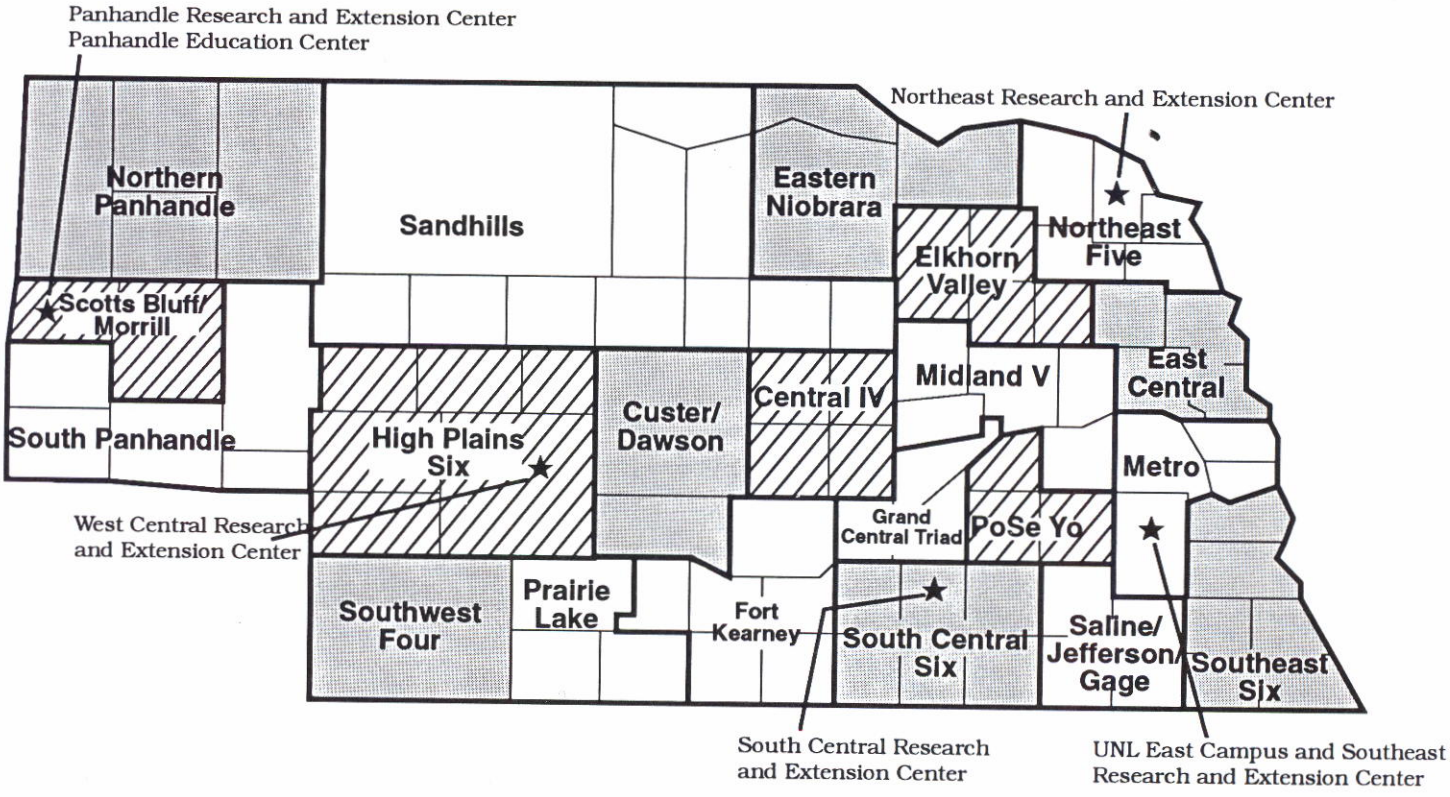

Agricultural Economics Outlook Reports

Government Programs and Implications

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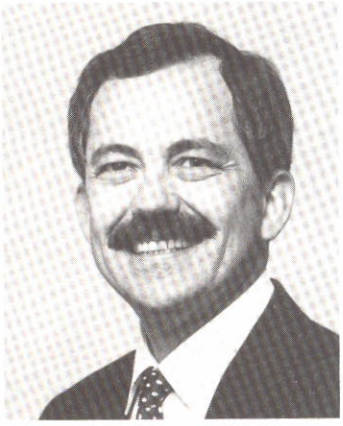
Introduction



This is the Agricultural Economics Department's third annual "Outlook Program," and the number of issues that need to be addressed appears to be growing! This is, of course, a reflection of the dynamic world in which we live. Environmental concerns, global competitiveness, and information age technologies are just some of the issues that represent both challenges and opportunities.

As we think about these issues, and others like them, it is important to note that we do not have the perfect crystal ball, and we cannot guarantee that our "predictions" will come true. What we do guarantee is that the outlook information we present will help stimulate thinking and discussion and will hopefully help the decision-making processes of individuals, families, agricultural and other types of businesses, various groups and organizations, and community leaders. Today's world is both exciting and complicated and high quality information and education can lead to a better world. Our outlook information is provided to you with that goal in mind.

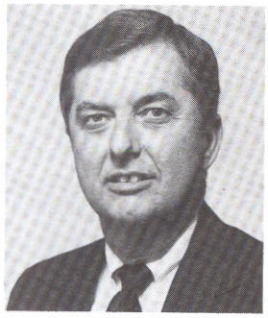
We are most pleased with the success of our first two Outlook publications and we hope this year's will be at least as well received as the others. Last year, over 2,500 copies of our outlook publication were distributed; several, well attended one-day meetings were held across the state; and, like this year, *Nebraska Farmer* ran the series of articles. Indeed, the support and involvement of *Nebraska Farmer* has been extraordinary, and those efforts are appreciated so very much.

As we bring to you our third effort, I also want to commend Dr. Lynn Lutgen for his continued excellent leadership of the department's "Outlook Program." As he and I reflect on this current undertaking we will be guided by your input — both your accolades and constructive criticism. Let us hear from you.

Sam Cordes, Department Head

1994 General Economic Outlook

A.L. (Roy) Frederick



A.L. (Roy) Frederick

The U.S. economy is in position to do well—although not spectacularly so—in 1994. Most discussions of the macroeconomy begin with economic growth. But for reasons noted below, other variables including inflation, interest rates and the value of the dollar in international transactions may be even more important to farmers and ranchers.

Economic Growth

Overall, the U.S. economy is expected to grow by about 3 percent in the year ahead, as measured by the real gross domestic product. This would be an improvement from 1993, when a lackluster performance in the first two quarters held overall growth to approximately 2 percent. (Official reports for the last two quarters had not been released when this was written.)

In general, the economy has made a modest recovery from the recession of 1990-91, notwithstanding somewhat higher housing starts, automobile sales, steel production and general retail sales that were being recorded in the waning months of 1993. Retail sales have been strongest in the Midwest and weakest on the East and West Coasts. A shrinking manufacturing base on the coasts together with efforts by all kinds of businesses to improve productivity have left many employees with uncertainty about their future employment, if not the reality of lay-offs. In such an environment, consumer confidence is shaky. Because consumers typically account for about 70 percent of overall economic activity, it is little wonder that the current recovery has been less vigorous than most since World War II. Economic growth may not matter as much to the agriculture/food sector as other sectors, simply because per capita demand for food is relatively constant, regardless of income levels. (Population growth of about .75 percent annually accounts for most of the growth in domestic food demand.) However, trade-offs do occur in the types of food consumed as incomes increase: Red meat is an often-cited example of a food sector where consumption increases with higher disposable incomes, although even that expectation may have been dampened somewhat in recent years by consumers' concerns about saturated fats and cholesterol.

Inflation

Inflation (defined as general price increases as measured by the gross national product deflator or the consumer price index) tends to be modest when economic growth is modest and all other factors are equal.

After cresting above 5 percent in 1989 and 1990, annual inflation rates have since fallen back into the 2-3 percent range (with the final average for 1993 perhaps closer to 2 percent). Most evidence (e.g., modest economic growth, little upward pressure on commodity prices and fairly stable real estate prices) points to inflation remaining near 3 percent in 1994 and beyond. An unexpected development, such as a disruption of oil shipments from the Middle East, could alter this prospect.

Typically, agricultural producers benefit in the initial stages of a spurt in the inflation rate because of higher commodity prices. Longer-run and on balance, however, inflation is harmful because it pushes up the price of input items long after commodity prices have ceased to be influenced by general inflationary pressures.

Interest rates

Both short- and long-term interest rates dipped to the lowest levels in more than 20 years in 1993. Modest economic growth, low inflation and astute management of the nation's money supply by the Federal Reserve Board were contributing factors.

Normally, low interest rates would stimulate spending on all kinds of big-ticket items by both consumers and businesses. However, with unemployment remaining near 7 percent nationally and concerns by

many others in the labor force about future employment prospects, many consumers are taking on only modest new debt loads—or paying off old debts. Businesses also are cautious, particularly those with a large international presence because the worldwide economy has been less than robust.

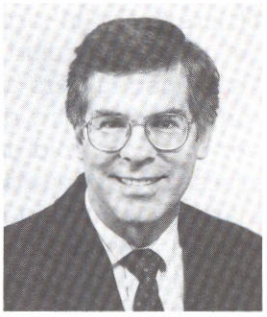
Almost certainly, interest rates will not drop much below the current approximate levels of 3 percent, short-term; 6 percent, long-term. Many economists, in fact, expect long-term rates to increase to about 7 percent by the end of 1994. In my judgment, much depends on economic growth and inflation. If either or both increase, even marginally, a nervous bond market will quickly push interest rates higher.

Value of the Dollar

The dollar's value relative to other currencies rose, on average, about 10 percent between September 1992 and September 1993. Other things equal, this increased the price of U.S. exports by 10 percent for foreign buyers.

Higher interest rates in the United States would push the value of the dollar higher, unless economies begin to grow more robustly around the world. U.S. policymakers have encouraged foreign leaders to attempt to stimulate their economies. As this was written, the dollar was trending lower against the Japanese yen (a good sign for U.S. exports) but was stuck at a relatively high rate against the German mark (a bad sign).

Agricultural Export Trading Companies: Their Potential for Nebraska Under NAFTA



Robert L. McGeorge

Robert L. McGeorge

In the words of Gary Hufbauer and Jeffrey Schott, Institute of International Economics, the proposed North American Free Trade Agreement (NAFTA) incorporates a "grand bargain on agriculture" — the gradual elimination of U.S. trade barriers on horticultural products in exchange for a gradual phaseout of Mexican trade barriers on grains, cereals and other temperate-zone crops. Intuitively, the grand agricultural bargain looks like a good deal for Nebraska. Since our farmers produce large quantities of agricultural products that will benefit from lower Mexican trade barriers, and negligible amounts of products that would lose the protection of substantial U.S. trade barriers, it seems reasonable to expect that Nebraska's agricultural interests should be major beneficiaries of the agreement.

Instead of relying upon our intuition that Nebraska's agricultural interests will obtain their fair share of increased exports of temperate-zone agricultural products to Mexico, it may be appropriate to consider adopting a more active approach by creating markets for identity-preserved products from Nebraska. Using corn as an example, these products might be defined as high quality grades of yellow corn that are currently produced in Nebraska, or white corn or other varieties that could be grown to meet the specific requirements of Mexican specific customers.

Some aspects of this strategy present a few difficulties. Anecdotal evidence from recent trade missions indicates that Mexican buyers appreciate the quality of Nebraska corn, and would rather buy it directly from farmers or farmer-owned cooperatives than from the big international grain traders. Moreover, it should be feasible to segregate corn meeting the required characteristics at the local elevators, load it into rail cars, and deliver the rail cars directly to their Mexican buyers.

Other aspects of this strategy raise serious problems. With the economies of scale derived from exporting large quantities of grain, the major grain traders reduce the per unit cost of operating their export departments (which include international marketing, transportation, insurance and legal personnel) to a relatively low amount, and use their bargaining power to obtain favorable transportation and insurance rates. It is doubtful that any single farmer-owned cooperative in Nebraska could attain the necessary economies of scale to be competitive in world markets.

It might be possible for a group of cooperatives, however, to employ their collective resources to become an effective and efficient exporter. With their combined export volumes, they might be able to attain the economies of scale that would justify their investment in a joint export department, and convince the railroads to offer them the same transportation rates that they charge the large grain traders.

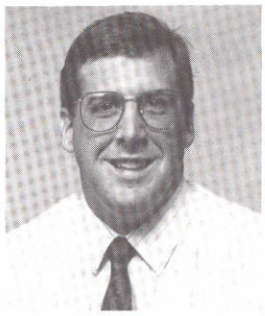
Talk of competitors coming together to jointly market and distribute their products, however, immediately raises another potential problem. U.S. antitrust laws impose severe criminal and civil damages (including the payment of treble damages) on competitors who collectively engage in anti-competitive activities, including price-fixing and the division of markets. Those laws also prohibit competitors from creating monopsonies that illegally depress the prices of goods and services that they purchase.

Fortunately, several underutilized provisions of U.S. law authorize groups of U.S. competitors to join together to attain the economies of scale needed to become efficient exporters — without incurring substantial risks under the antitrust laws. The Export Trading Company Act of 1982: (a) limits the application of the antitrust laws to conduct that has a "direct, substantial, and reasonably foreseeable effect" on U.S. trade; and (b) provides an opportunity for export trade associations to virtually eliminate their members' practical exposure to the antitrust laws for activities that are within the scope of a certificate of review obtained by the association.

Obviously, the commercial and legal issues involved in organizing export trading companies to maximize Nebraska's exports of bulk grains to Mexico are complex, but, the potential opportunity should be sufficient to warrant a closer study of the costs and benefits by Nebraska agricultural interests.

NAFTA and Agriculture in Nebraska

Jay E. Rempe and E. Wesley F. Peterson



Jay E. Rempe

E. Wesley F. Peterson

The political debate over the North American Free Trade Agreement (NAFTA) is heating up and like most political discussions the debate has had its share of half-truths and myths about the possible economic effects of the accord. For Nebraskans interested in what NAFTA might mean for Nebraska agriculture, the hyperbole surrounding the agreement can be extremely frustrating. Which of the many claims about the economic effects of NAFTA are reliable and accurate?

A study recently completed by members of the Agricultural Economics Department, commissioned by the Nebraska Corn Board, evaluated several studies of NAFTA in an effort to answer this question. Although different economic models, data, and assumptions make comparisons difficult, by examining the studies as a group, conclusions could be drawn as to the direction and magnitude of the effects of NAFTA on the U.S. agricultural sector and the possible implications for Nebraska agriculture.

In general, the results from the studies reviewed indicate that NAFTA will have a positive impact on U.S. agriculture. U.S. agricultural output, exports, imports, and employment are expected to be greater with NAFTA compared to no NAFTA, but the overall impact would be small. The USDA predicts that by the end of the transition period, U.S. agricultural exports would be $2 billion higher with NAFTA than without. Sectors that stand to benefit the most include dairy and dairy products, coarse grains, wheat, oilseeds, and meats and livestock products.

The possible effects of NAFTA on corn, livestock, and livestock products have received particular attention in Nebraska because of their importance to the state's agricultural economy. According to the studies reviewed, U.S. corn exports to Mexico are expected to be substantially larger with NAFTA than without an agreement. Research within the department indicates that U.S. corn exports to Mexico with NAFTA are likely to be 92 percent higher in 2009 than without.

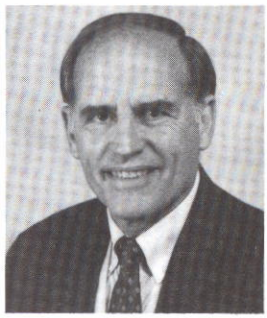
In order to assess the implications of NAFTA for Nebraska's corn industry, the effects of NAFTA on U.S. corn exports were incorporated into an econometric model developed by the Rural Policy Research Institute (RUPRI). The outcome of the RUPRI model suggests that the price of corn could be 5 to 9 cents per bushel higher with NAFTA compared to no NAFTA by the end of the 15-year transition period. The Nebraska Corn Board estimates that this price hike could add over $200 million to Nebraska's economy.

U.S. exports of livestock and livestock products to Mexico are also expected to be higher with NAFTA than without. At present, Mexico's per capita consumption of beef is only about half that of the United States. With NAFTA, greater economic growth and continued population growth are expected to boost Mexico's beef consumption. The USDA estimates that beef exports under NAFTA could reach 200,000 metric tons by the end of the transition period. U.S. pork and poultry exports to Mexico are expected to grow under NAFTA as well. The USDA predicts that pork exports with NAFTA would be twice that without NAFTA, and that poultry exports would be 40 percent greater.

In summary, agricultural producers in Nebraska would generally benefit from NAFTA because it would have strong positive impacts on the most important agricultural goods produced in the state. For more information on NAFTA and the recently completed study, please contact the Department of Agricultural Economics at (402) 472-3401.

Long-term Trends in Nebraska's Farm Product Mix

Richard K. Perrin



Richard K. Perrin

Nebraska's primary farm commodities over the past 20 years have been cattle and hogs on the livestock side, plus corn, sorghum, soybeans and wheat on the crop side. Together, these commodities (the "big six") have consistently accounted for nearly 95 percent of cash receipts from farming.

Cattle and calves alone contribute about half of the cash receipts, and this share has grown steadily over the past 20 years. Furthermore, Nebraska is the second-leading state in cattle production and its share of national production has also grown over the past 20 years, due to an increase in feedlot production. This growth indicates that the largest producing sector in the state is in a strong competitive position with respect to other beef-producing areas in the U.S.

The share of hogs in Nebraska cash receipts has fallen slightly despite increased production, indicating that the rate of growth has been less than for other commodities (cattle, primarily). Nebraska hog producers have also proven competitive over the past 20 years, as the state's share of national production has grown steadily, even though the rate of increase here has not been as dramatic as in North Carolina and Missouri, states that are challenging the swine industry with a new and very efficient large-scale production system.

The four main crops shown in the graphs have contributed about a third of cash receipts since 1970, more when prices and yields were high, less when they were not. Since the 1970s sorghum and especially wheat have declined in importance, while soybeans have risen. Soybean producers have doubled their share of the national market in 20 years.

This picture, general as it is, suggests that Nebraska agriculture has been in a strong competitive position because producers of the six major commodities, together constituting about 90 percent of farm cash receipts, have steadily increased their shares of national production over the past twenty years. In an age of rapid technological and market changes, however, competitive positions can be eroded quickly if producers do not have access to adaptable versions of new technologies and institutional arrangements.

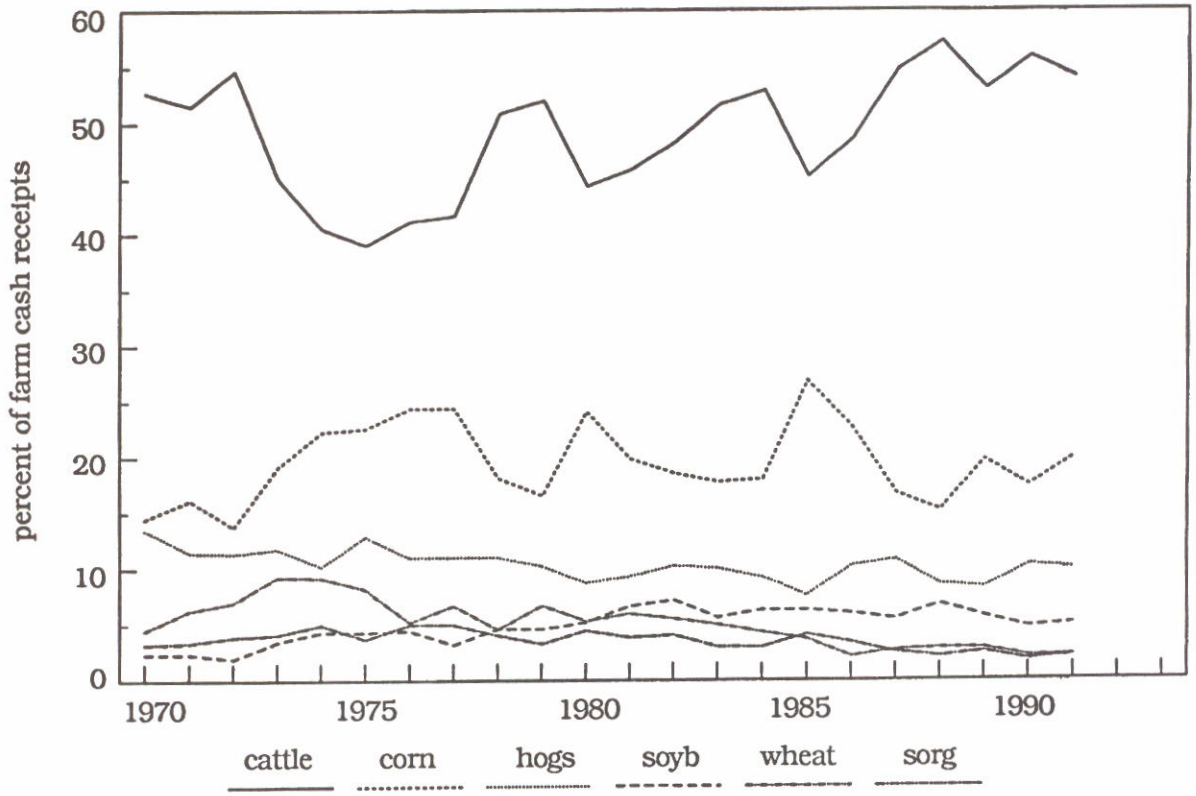


Figure 1. Commodity shares of Nebraska cash receipts.

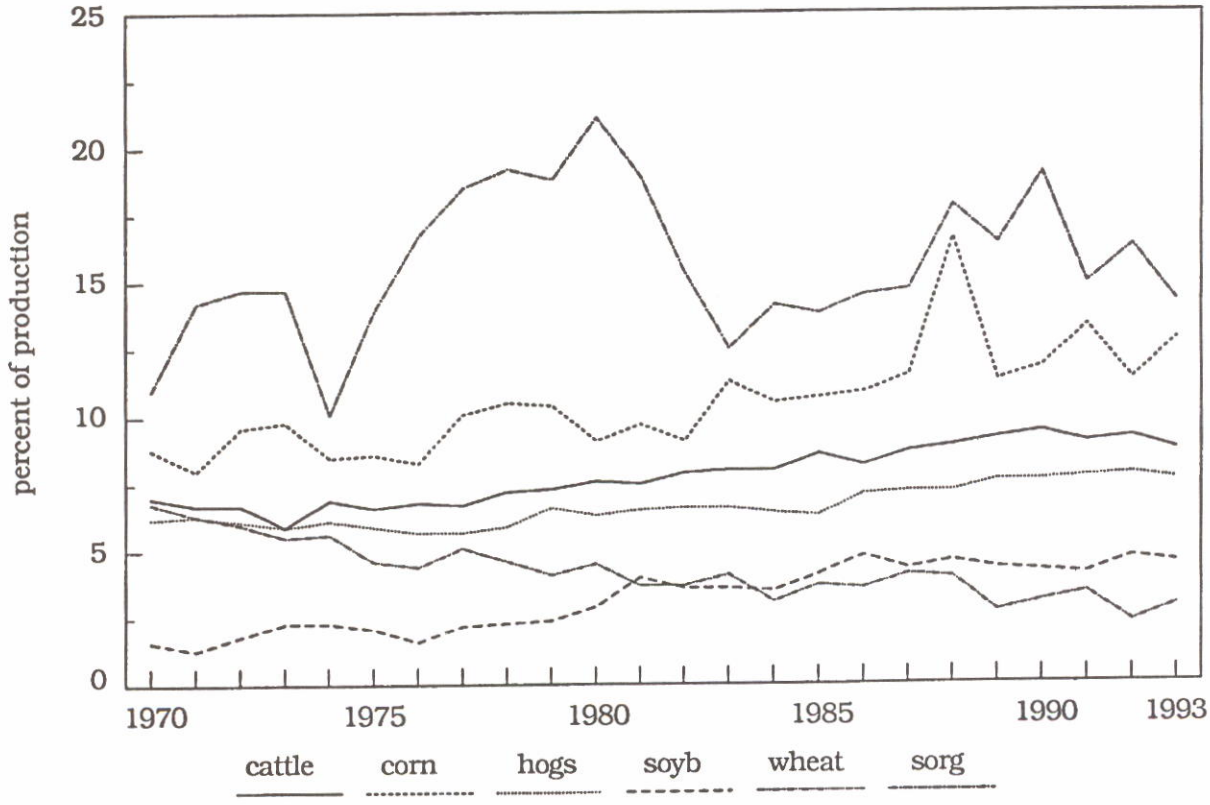


Figure 2. Nebraska's share of total U.S. production.

The State of the State's Transportation System

Dale G. Anderson

Dale G. Anderson

Transportation is of major importance to the people of Nebraska owing to the state's location and the agricultural focus of its economy. A hinterland location puts it a long distance from most of the consumers of the nation and world, and products of agriculture are heavy, bulky and expensive to transport.

More than half of all rail traffic originating in the state in 1992 consisted of agricultural products. Railroads predominate in long-haul bulk shipments such as grain moving to ports on the Gulf of Mexico and Pacific Ocean and to distant milling and feed-deficit destinations. The state is served by three major railroads—the Burlington Northern (BN), the Chicago and North Western (C&NW) and the Union Pacific (UP)—and eight small, short-line railroads. These carriers operate over 4,093 miles of track. The BN, with 2,284 miles of track in the state, and the UP with 1,049 miles, are predominant carriers in Nebraska as well as in the nation. Barge shipment of grain and soybeans through Missouri River ports is important to producers near the river, but of modest consequence for the state as a whole. Nebraska has 19 barge terminals on the Missouri River at seven locations between Blair and Brownville. Ten of the terminals ship grain.

Soybeans move largely by truck to local processors. Trucks move grain to rail and barge heads and are the exclusive carriers of Nebraska slaughtered and processed meat and meat products, milk and milk products and most other locally-processed agricultural products. About 93 percent of the 78,496 miles of locally-maintained rural roads are unpaved; most form the rectangular grid laid out at one-mile intervals during the original surveys in the 19th century. State-maintained highways, mostly hard-surfaced, comprise 9,951 miles, of which 481 are part of the interstate system; 600 more miles are to be upgraded to expressway status.

Long distances to most major markets and a relatively low density of people and goods pose major transportation challenges. Over-building of track in the 19th century and growing truck competition in the late 20th century have prompted a gradual abandonment of rail trackage. Some 1,518 miles have been lost since 1970. Another 461 miles have been identified by the railroads as candidates for abandonment, including the C&NW's 320-mile route between Chadron and Norfolk. The C&NW has discontinued service over this line and is seeking to abandon the track as well.

Rural bridges are a large part of the state's major road and highway investment and the source of costly maintenance problems. Counties are responsible for 74 percent of the state's total 15,704 bridges; 6,017 or 38 percent of them have been identified as being deficient either structurally or functionally.

A central location also has some advantages, a major one being relatively equal access to numerous markets. Feed grains, for example, move in any given year to a variety of destinations, including by rail or rail/barge to Mexico and to ports in California, the Pacific Northwest, Texas and Louisiana; by rail and truck to feed lots in Texas and poultry operations in Arkansas; and by truck to feed lots in Colorado. When one market falters another may take up the slack; strong local feed demand is always a fallback.

The development of jumbo covered hopper cars linked in train-load units and in dedicated service between single pairs of origins and destinations has opened the markets of the world to Nebraska grain producers. An estimated 141 of the state's grain elevators have upgraded their facilities to accommodate the loading of trains of 25 or more cars each; 81 load 50 or more cars and 36 load 75 or more cars at a time. Big challenges have yielded big solutions. But the state's "end-of-the-road" location along with expected world scope competitive challenges of the coming century reinforce the need for working toward making a relatively good transport system still better.

Issues For The 1994 Nebraska Legislature

A.L. (Roy) Frederick

By A.L. (Roy) Frederick

The Nebraska Legislature meets for the short (60-day) general session in 1994. Bills that did not receive final action in 1993 may be carried over to the upcoming session and, of course, new bills may be introduced and considered. In addition, 1993 interim studies (undertaken during the summer and fall months) sometimes give rise to legislative bills. An eclectic list of potential issues of significance to farmers and ranchers follows:

1. **Personal property taxes:** Should all or part of current personal property tax system be rescinded? If so, what should be the source of replacement funds?

2. **Education funding:** Should the reliance on local property taxes for elementary and secondary schools be reduced? Is the current system for allocating state aid to schools equitable?

3. **Rural health policy:** What adjustments in state laws should be made to prepare rural Nebraska for a national health-care plan?

4. **Agricultural equipment liens:** Should agricultural equipment firms be allowed to file liens against farming operations?

5. **Liability insurance and bonding for chemical applicators:** Should applicators be required to have insurance and/or a bond to protect citizens from unwanted chemical drifting from aerial spraying?

6. **Poultry inspection:** Should state government take over USDA poultry inspection responsibilities in the state?

7. **Groundwater and surface water integration:** Should state law be changed to recognize the relationship (for regulatory purposes) between groundwater and surface water?

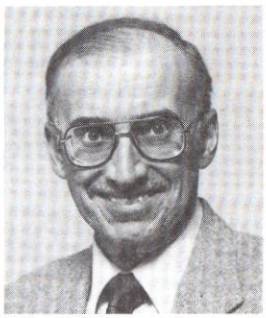
8. **Natural resource policy coordination:** Can public responsibility for water and other natural resources issues be better coordinated by state and local governments in Nebraska?

9. **Ethanol:** What specific duties should be assigned to the Nebraska Ethanol Board in promoting the use and production of ethanol using agricultural products grown in Nebraska?

10. **Interstate Grain Compact:** Should Nebraska remain as one of the five member-states in the Interstate Grain Compact? If so, should the compact's duties/responsibilities be altered?

Agricultural Income and Finance Outlook

H. Doug Jose



H. Doug Jose

Farm Income

Based on the current crop and livestock outlook, the net farm income in Nebraska in 1994 should be consistent with 1993. Low interest rates and relatively stable input prices will keep farm production costs in 1994 comparable to 1993. Net farm income in 1992 in Nebraska was $2.7 billion, up from $2.4 billion in 1991. Finished cattle prices have dropped since the beginning of the year but could still average higher in 1993 than in 1992. Even with crop disasters, realized net farm income for 1993 should be at least equal to 1992. The 1992 net farm income represented $48,078 per operation (before income taxes) for the 56,000 farm operations in the state. Allowing for many multi-family operations, the net farm income per operator would be somewhat less, possibly in the range of $40,000. Out of this, the operator has to pay income taxes and family living costs. Data from the Nebraska Farm Business Association shows the average family living costs in 1992 were slightly more than $28,000.

Livestock and livestock products account for about 65 percent of the value of farm marketings in Nebraska. Livestock prices should remain relatively strong in 1994, holding the value of livestock marketings near the $6 billion level.

While the aggregate income data look favorable, the margin left for retirement and capital replacement is narrow. There is also a wide dispersion of net income among Nebraska farms that doesn't show up in the aggregate data. Requests for farm debt mediation assistance in Nebraska doubled in 1992-93 compared to the 1991-92 planning period.

Farm Balance Sheet

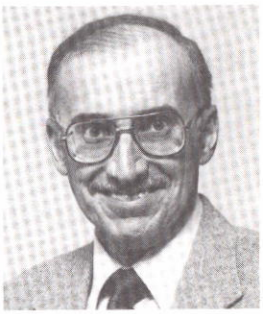
Nationally, the farm balance sheet improved in 1992. On December 31, 1992, farm assets were valued at $861 billion, up from $843 billion a year earlier. Farm debt declined slightly from $139 billion to $138 billion. Debts as a percent of assets were 16.1 percent, down marginally from 16.4 percent at the end of 1991. Corresponding data for 1992 for Nebraska were not available when this report was prepared. At the end of 1991, the debt:asset ratio for the Nebraska agricultural sector was 17.7 percent. This is a significant improvement from the peak of 31 percent in 1985.

The good financial status of Nebraska agriculture is consistent with the aggregate financial conditions in the state. Noncurrent bank loans represented only 1.02 percent of all bank loans at the end of 1992. This was down from 1.12 percent a year earlier and was lower than all other states in the central plains area. Profitability measures, however, put the farm financial situation in perspective. The rate of return on assets for the U.S. in 1992 was 3.9 percent and the rate of return on equity was 3.1 percent. The comparable figures for 1991 for Nebraska (the last year for which state data is available) were 4.2 percent and 3.8 percent, respectively. Note that return on assets is computed before interest is deducted from income. Interest paid is deducted from income to compute return to equity.

Synopsis

While the financial outlook is positive, the challenges of transforming the recent trends into a vibrant agricultural industry are significant. Producers and those involved in supporting and servicing agriculture must strive to keep farm/ranch operations competitive in the face of major structural changes in agriculture, increasing environmental regulations and declining government support. Also, the aggregate conditions mask the variability in financial conditions among individual farm and ranch families. The experiences of just a decade ago stand as a reminder of how fragile our agricultural economy is. The disasters of 1993 will certainly cause hardships for some operators, even though the impact may not be evident from a financial analysis of the whole sector. Successful managers will make the necessary adjustments based on a realistic appraisal of the opportunities available to them.

Production Cost Prospects for 1994



H. Doug Jose

H. Doug Jose

There were no major surprises in production costs in 1993. Guidelines for assessing changes in the major input costs and the implications for 1994 are summarized below:

Energy: Diesel prices followed the typical seasonal trend in 1993 by declining slightly in the summer. The world supply-demand relationship is still in favor of the consumer. World oil prices softened slightly in the latter part of 1993 but additional significant declines are not probable. As Russia struggles with its political and economic future, development of its oil reserves is still a long way off. The higher federal gasoline tax on October 1, 1993 and the Clean Air Act, which requires truckers to use low-sulphur diesel fuel, generated a sharp increase in retail diesel fuel prices. This was a short-term supply-demand phenomena. These events should have little or no impact on the price of farm diesel fuel for the 1994 production year. Refiners' costs per gallon to produce regular diesel may increase marginally because they will manufacture less regular diesel along with the new low-sulphur diesel. But no significant cost increases are anticipated.

Outlook: Seasonal variation but no major prices shifts.

Fertilizer: Prices held even to down slightly in 1993 compared to 1992.

Outlook: With energy prices remaining steady, no major changes in fertilizer prices.

Chemicals: Chemical prices have increased an average of 5 percent per year for the last five years. The costs of developing more environmentally friendly

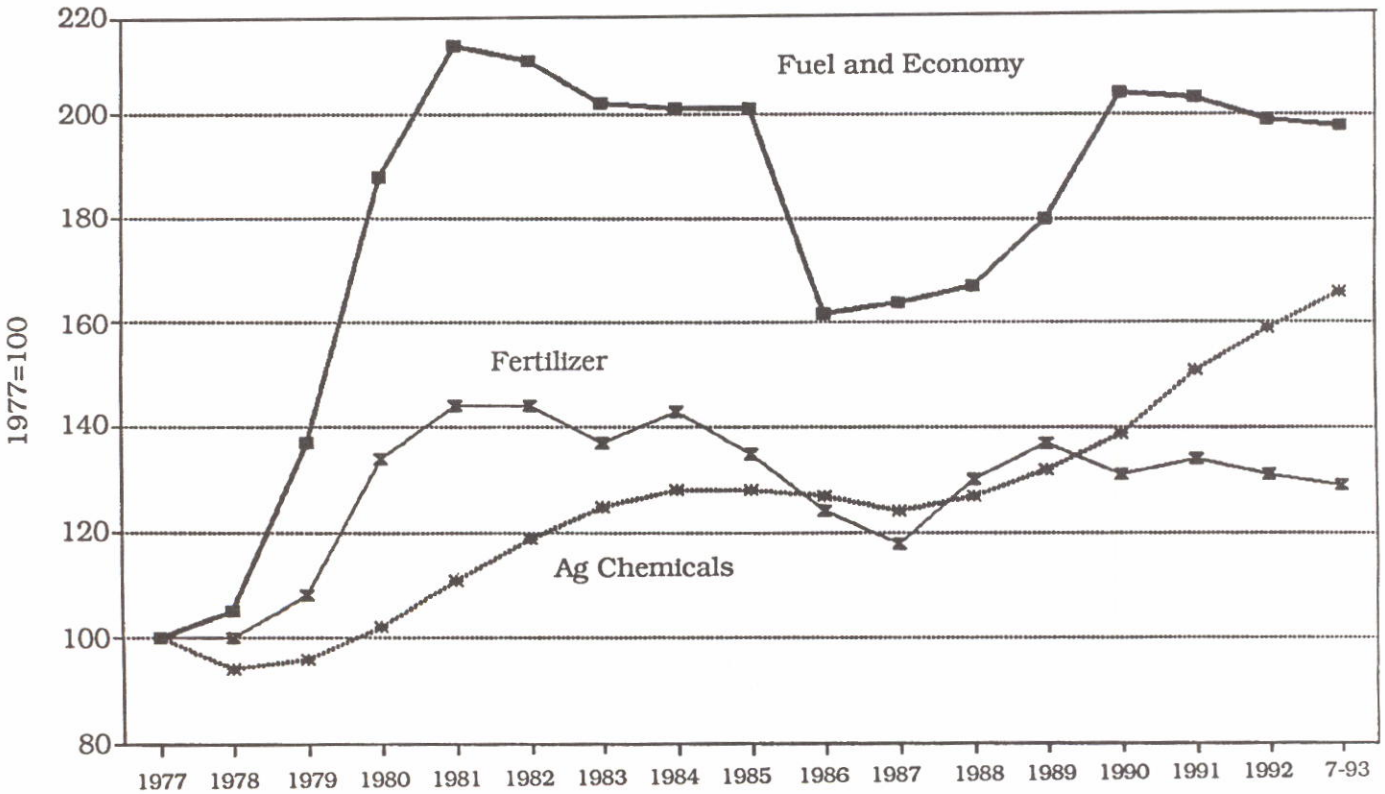


Figure 1. Selected indexes of prices by farmers: 1977-1993.

chemicals will continue to push costs up.

Outlook: Price increases of 4 to 6 percent can be expected.

Interest Rates: The downward trend in interest rates continued in 1993. Since the mid-80s, agriculture has paid a premium for the use of debt capital compared to bank prime rates and U.S. Treasury rates. Prior to 1985, the average rate for agricultural loans was close to or less than these standard rates.

Outlook: No major changes in interest rates in 1994. Lenders will continue to view agriculture as risky and charge rates that are above prime bank rates and rates paid on savings instruments.

Machinery: Farm machinery prices have increased an average of 4.5 percent over the past five years. New machinery technologies, increasing farm sizes and an aging machinery complement will force many growers to make machinery replacement decisions. The technologies to utilize and the financing arrangements will be significant considerations.

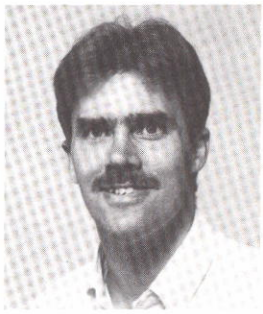
Outlook: Price increases of about 5 percent can be expected.

Risk Strategies: The weather related events of 1993 have emphasized the need to include risk management plans when budgeting production costs. Congress responded to the 1993 problems with another disaster assistance program. There are definite indications this will change in the near future. Secretary of Agriculture Espy is considering alternatives to combine the disaster and crop insurance programs. The result is likely to be a plan which will provide all growers with some level of "free" crop insurance, such as 50 percent coverage. Growers would have the option of adding on higher levels of multi-peril crop insurance coverage. As this goes to press, no decision has been announced.

Outlook: Look for major changes in the crop insurance and disaster programs over the next two years. Analyze risk management needs and incorporate into input costs.

1994 Custom Rates Outlook

Raymond E. Massey



Raymond E. Massey

Custom farm work performs an important function in an efficient farm economy. It allows smaller farmers to operate without a full complement of equipment. In the same way, custom field work eases the transition which occurs as individual producers increase the size of their operation and find that they need additional help but are not quite ready to purchase additional equipment. Alternately, it allows farmers to own a larger than currently necessary set of equipment and partially offset their cost by performing custom work. Custom work also serves as a risk absorber so that producers have a backup in case their equipment fails and they need additional help in a short time.

A trend that is becoming more common is for landowners to hire all farm work done on a custom basis rather than use the more traditional cash or share rental arrangements. This allows the landowner to receive all of the profits from production—but also assume all of the risks. It also requires more management involvement on the part of the landowner. The landowner must find a custom operator who can perform all of the necessary operations. Usually a single custom operator is hired to do everything from seed bed preparation to harvest. The arrangement must be clear as to what specific operations are involved in the custom fee and when the operations will be done.

The 1992 custom rates survey collected data on custom farming (Table I). The range for each is significant since custom farming for one landowner may include tillage practices where another one does not. The wide range revealed for custom farming irrigated corn may be due to different types of irrigation equipment which different farms have.

A study of the costs of performing various farm field activities revealed that, on the average, fuel and lube accounted for 14 percent of the rate charged by custom operators; labor, 17 percent; and repairs and maintenance, 18 percent. This means that about 50 percent of the custom charge is due to variable costs which must be recaptured regardless of the profit objective of the operator. The remaining 50 percent of the custom rates charge is used to cover the overhead of operating a business and to pay the ownership costs of the machinery and equipment used.

These percentages, coupled with the 1992 Nebraska custom rates survey results, can be used to estimate what custom rates might be expected to be in 1994. Any increase in fuel, wages or repair would definitely need to be captured in next year's rates. Fuel prices remained constant throughout 1993 and no foreseeable reason for a significant increase exists. Agricultural wages increased 5 percent in 1993 from 1992 prices. This greater than inflation increase in wage rates could be due to an increasing shortage of agricultural labor. If this is the case, wages could again increase 5 or 6 percent next year. A 5 percent increase in wages in both 1993 and 1994 translates into almost a 2 percent increase in custom rate costs. Repair, tractor and machinery costs increased approximately 3 percent from 1992 to 1993. Assuming a 3 percent increase in repair costs in 1994, custom rate costs could increase 4 percent due to repair cost adjustments.

Given this information, custom rates in 1994 would be expected to increase a minimum of 3 percent from those reported in the 1992 Custom Rates NebGuide available at your local extension office. On the high end, the custom rate increases from 1992 to 1994 might be 6 percent. This 6 percent increase would capture all of the costs of performing work.

Table I. 1992 Custom Contract Farming Rates

Custom Contract Farming	*Average*	*Range*
Winter Wheat	$43.31	$35.00 to $ 58.00
Grain Sorghum	$53.33	$40.00 to $ 75.00
Soybeans	$58.21	$40.00 to $ 85.00
Dryland Corn	$53.70	$35.00 to $ 80.00
Irrigated Corn	$80.53	$60.00 to $135.00

Projected U.S. and Nebraska Tractor Sales

Dennis M. Conley

Dennis M. Conley

The economic conditions in the agricultural sector that influence the purchase of farm tractors (40 horsepower and over) have essentially remained unchanged from last year. An on-going UNL study identified key economic variables in the agricultural economy that affected farm tractor sales over the 40 year period of 1953 to 1992. The study measured sales in units of horsepower because it was a more uniform measure of what a producer was buying than were tractor numbers. The basic utility a producer receives from a tractor is the horsepower it provides.

The economic variables found to explain farm tractor sales included the price of tractors, prices received by farmers for crops, interest rates, farm employment and total farm equity. Of these variables, the price of tractors had the greatest effect on sales. When the price for an average size tractor rose by 1 percent, sales would drop by 2.2 percent. Total farm equity had the second largest effect on sales. It was an indicator of wealth reflecting a producer's perception of their long-term financial position. When total farm equity went up by 1 percent, then sales increased by 1.6 percent.

Historically, farm tractor unit sales reached a record high of 156,700 units in 1973 but fell to 139,000 units by 1979, and substantially dropped to 47,300 units in 1986. A recovery began in 1987 with sales reaching 66,300 units in 1990 but have since declined.

In forecasting unit sales for the U.S. and Nebraska for 1993 and 1994, the five economic variables explaining historical sales were projected. The tractor price index continues to increase by about 4 percent per year. Total farm equity has grown only slightly since 1992, and the prices received for crops also shows only a modest increase even with the extensive floods in the summer of 1993. Farm employment, which is being replaced by machinery power, continues in a long-term steady decline. Interest rates are at an all time low, and offer a positive incentive for purchasing durable items, such as a farm tractor. The interest rate is expected to remain at current levels for 1993, and possibly increase only slightly by 0.2 percent in 1994.

Based on projections for these economic variables, projected U.S. and Nebraska unit sales for 40 horsepower and over, new farm tractors are shown in Table I.

Table I. U.S. and Nebraska Farm Tractor Sales

	1993	*1994*
U.S.	52,000	51,700
Nebraska	1,380	1,370

Soybean Outlook for 1994

Lynn H. Lutgen

Lynn H. Lutgen

Increased foreign production of oil seeds, coupled with sluggish growth in world usage, will keep pressure on U.S. soybean prices even though production in the U.S. declined about 13 percent from a year earlier.

The 1993 soybean production in the U.S. suffered from late planting, flooding, abundant rainfall and freezing before reaching full maturity. In 1993, the U.S. produced 1.891 billion bushels of soybeans, leaving a total supply of 2.188 billion bushels for the 1993-94 season. This decrease in production led to a substantial decline in carry out, down from 290 million bushels to 205 million bushels. Normally, a 205 million carry would be considered barely adequate and would lead to cash price levels above $7. The increase in world competition from other oil seeds will certainly dampen that kind of price expectation. This is indicated when looking at the demand number. Exports are expected to drop from 775 million bushels to 645, or a decline of 17 percent and crushing, due to increased meal competition, is expected to decline by 45 million bushels. The key to where soybean prices may go in 1994 is very much dependent on the world situation.

Foreign world oil seed production is projected up 4 percent from last year. The increase in production is mainly attributed to growth in Canada rapeseed and India's soybean production. Production in the EC will remain fairly constant, while China's production is growing steadily, needing less soybean and meal from the U.S. There has been a tightening of soybean oil inventories as measured by higher oil prices, but lower meal prices will prevail because of an ample meal supply around the world.

In spite of all the negative news, soybeans hold the best chance for recovering in the spring of 1994 as compared to the other major crops. A 205 carry out is marginal. One would expect cash prices to range in the fall of 1993 between $5.90 and $6 with a potential of over $6.50 after the first of the year.

Table I. U.S. Soybean Supply and Demand

	1991-92	*1992-93*	*1993-94**
		Million Acres	
Area planted	59.2	59.33	59.3
Harvested	58.0	58.4	56.3
		Bushels	
Yield /harvested acre	34.2	37.6	33.8
		Million Bushels	
Beginning stocks	329	278	292
Production	1987	2197	1891
Supply, total	2319	2477	2188
Crush	1254	1280	1235
Exports	684	775	645
Seeds/residual	103	132	111
Use, total	2041	2187	1983
Ending stocks total	278	290	205
Average price	$5.58	$5.60	$5.85

* Projections for the 1993-94 crops are USDA's World Outlook Board expectations of supply and disappearance as of October 12, 1993.

Corn Outlook for 1994

Lynn H. Lutgen

Lynn H. Lutgen

Another year of unusual weather, 1993 brought abundant rainfall causing delays in planting, flooding, destruction of crops, and a cooler than normal growing season. U.S. corn production dropped over 2.55 billion bushels in 1993 from a record crop in 1992.

A combination of lower yields and a large decrease in the number of acres harvested led to the decline. In 1992, 72.1 million acres were harvested versus 64 million acres in 1993, and the yield declined from 131.4 to 116 bushels per acre.

Producers entered the fall harvest looking at lower yields and low test weights coupled with an overabundance of stock rot and other problems like immature corn. By fall the most perplexing question producers faced was, "With such a large decline in U.S. production and ending stocks expected to drop from 2.15 billion to 1.085 billion, how can prices be as low as in the fall of 1992?" In October, USDA projected corn prices to range between $2.15 and $2.55. Nebraska's fall cash prices ranged from $2.10 to $2.35 at the beginning of harvest.

The answer to the previously posed questions can only partially be answered from the supply and demand data shown in Table I. The key lies not in the supply side of the equation, but in the demand side of the equation, mainly in the export number. During the 1992-93 marketing year, following a large crop of 9.5 billion bushels, the U.S. exported 1.675 billion bushels, up from the 1991-92 year. The export number is expected to decline during 1993-94 to less than 1.4 billion bushels, the lowest level since 1985. What appears to be only a decline of 275 million bushels would certainly not offset a two billion plus bushel decline in production.

What the table doesn't show however is the world supply of coarse grain (corn, sorghum, barley, oats, rye, millet, and mixed grains). World production in coarse grains (mainly due to the U.S.) declined from 857.96 Million Metric Ton (MMT) in 1992-93 to 807.05 MMT projected 1993-94, but 7 MMT above the 1991-92 year. This gave the world a projected total supply of 966.41 MMT for 1993-94 which was also down from

Table I. U.S. Corn Supply and Demand

	1991-92	*1992-93*	*1993-94**
		Million Acres	
Area planted	76.0	79.3	73.7
Harvested	68.8	72.1	64.0
		Bushels	
Yield-harvested acre	108.6	131.4	116.0
		Million Bushels	
Beginning stocks	1521	1100	2113
Production	7475	9479	6962
Imports	20	6	10
Supply, total	9016	10585	9085
Food/seed	1454	1510	1550
Feed and residual	4878	5250	5050
Exports	1584	1675	1400
Use, total	7916	8435	8000
Ending stocks total	1100	2150	1085
Average price	$2.37	$2.05	$2.20

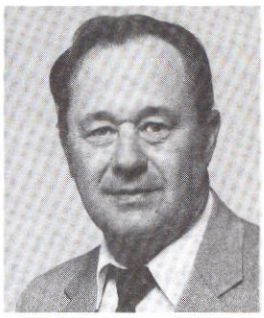
* Projections for the 1993-94 crops are USDA's World Outlook Board expectations of supply and disappearance as of October 12, 1993.

991.38 MMT in 1992-93, but up from production in 1991-92 of 940.93 MMT. Expected usage in the 1993-94 period is projected at 834.55 MMT, or up from the 1992-93 figure of 832.02 leaving a total ending stock of 131.87 MMT in 1993-94. While this will produce a draw down in stocks, total supply will still outpace total demand. Consequently, there is an ample supply of coarse grain to carry the world through to the 1994-95 production season.

Unless something large and unforeseen should happen, U.S. producers will face a rather dismal export picture for the first half of 1994. It should be noted that the U.S. has only 40.84 MMT of the world 131.87 MMT carryover. This means the U.S. will face stiff competition in the world marketplace. Because the weakness is on the demand side of the equation, producers should not expect much of an increase in prices from fall into the January to April period, as we would normally expect. In fact, after the U.S. harvest is completed, we may even see a decline in prices, which unfortunately places fairly low odds on seeing if prices can reach the upper portion of USDA price range of $2.15 to $2.55 for 1993-94.

Wheat Outlook for 1994

Lynn H. Lutgen



Lynn H. Lutgen

In the coming year, U.S. wheat will face more competition in the world market. The U.S. wheat crop suffered from abundant rainfall and disease problems resulting in lower production and quality than previously exported in the summer of 1992. Even with the problems faced by U.S. wheat producers, production only declined approximately 37 million bushels from last year's crop, lowering production from 2.459 billion bushels to 2.422 billion bushels. Carry out is projected to increase from 529 million bushels to 698 million bushels. While this increase is not overwhelming, with the exception of the EC, production also either rose or slightly declined in major exporting countries such as Canada and Australia. Consequently, while the U.S. carry out rose only 168 million bushels, U.S. exports are projected to decline 229 million bushels, raising the U.S. projected carry out stock up 32 percent from last year.

The entire decline in demand cannot simply be explained or blamed on competition increasing their production. Their exports are also projected to be less than last year. Total world wheat production rose from 560.01 million metric ton (MMT) to 564.44 MMT, while the U.S. 1992 production dropped from 66.92 MMT to 65.9 MMT, only accounting for .94 MMT of that increase. While world consumption rose from 550.49 MMT to 561.86 MMT or an increase of 11.37 MMT, carryout is expected to increase from 138.05 MMT to 140.63 MMT. Roughly translated, this means that wheat production also rose in countries that would normally be considered importers of wheat. While some of these countries won't be importing because of ample domestic supplies, others such as the former Soviet Union will be exporting. This combination of increased production among the major exporters and increased production within the major importers will continue to apply pressure to U.S. wheat prices throughout the marketing year. Producers can expect a modest price recovery after the first of the year, but nothing substantial, because of the kind of year the U.S. had. Holding grain after harvest was advantageous because producers saw more of an increase in price, not only from market movement, but also from a decline in the amount of damage discounts taken at harvest. It would appear that most cash wheat prices will range between $2.90 and $3.25 from December 1993 through March 1994.

Table I. U.S. Wheat Supply and Demand

	1991-92	*1992-93*	*1993-94**
		Million Acres	
Area planted	69.9	72.3	72.1
Harvested	57.7	62.4	63.9
		Bushels	
Yield/harvested acre	34.3	39.4	40.0
		Million Bushels	
Beginning stocks	866	472	529
Production	1981	2459	2422
Imports	41	70	75
Supply, total	2888	3001	3026
Food/seed	883	923	929
Feed and residual	254	196	275
Exports	1280	1354	1125
Use, total	2416	2472	2329
Ending stocks total	472	529	697
Average price	$3.00	$3.24	$2.75-3.05

* Projections for the 1993-94 crops are USDA's World Outlook Board expectations of supply and disappearance as of October 12, 1993.

1994 Slaughter Cattle Outlook

Allen C. Wellman

Allen C. Wellman

Slaughter cattle prices during 1993 ranged between $68 and $85 per cwt. The difference between the highs and lows in 1992 was about $9 per cwt. Cattle feeders were excellent marketers during the first half of 1993, but beef production picked up in the 3rd and 4th quarters. Cow slaughter continued to pick up in 1993. Total beef production for the year ended up about 1 percent above 1992. Returns to cattle feeders in 1993 were above average during the better price periods. Cattle feeding losses were persistent during the summer and fall.

Supply Forecasts

Placement of cattle into feedlots and resulting feedlot inventories in the first half of 1994 are likely to run larger than the same period in 1993. Some increase in cow slaughter, continuing a trend that started in 1992, could result in beef production the first half of 1994 running 1 to 3 percent above the same period a year earlier. Cattle feeders should guard against increasing marketing weights, or holding cattle to insure that the beef production increases come slowly so the market is not hit with periodic price pressures.

Cattle placements in the last half of 1994 will reflect market conditions at the time the decisions are being made. Low feed grain prices, declining feeder cattle prices and some optimism for the U.S. and world economies will likely generate increased placements. If cattle close outs are poor or negative then placements will likely be reduced.

The slow expansion in total cattle numbers that started in 1991-92 and the large number of beef replacement heifers available to the cow herd suggests continued increases in cow slaughter. Cattle feeders can no longer expect to increase fed cattle numbers and have these increases offset by reduced cow slaughter.

Demand Prospects

Consumer demand for beef continues to stabilize. It appeared in 1993 that consumers reduced their consumption of durable goods slightly and increased their consumption of beef and other meats.

Educational programs about the nutritional value and wholesomeness of beef should continue to be made available to the consumer. It appears in the 1990s that beef promotion will play an important role in shaping consumer preferences. The competition from other red meats and poultry will continue to increase.

Marketing Plan

Cattle feeders should continue to update their marketing plan in 1994. Price risk management strategies should be formulated to handle a wide range of market outcomes.

Price Forecasts

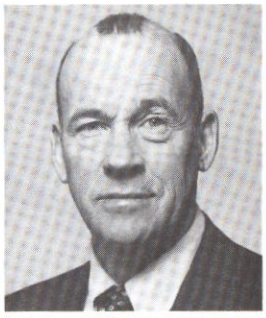
First quarter 1994 prices are expected to average below year ago levels. Prices averaged $79-80 per cwt. in the January to March period in 1993.

Second quarter 1994 prices are also expected to average below the April to June 1993 prices. Prices averaged near $80 during the 2nd quarter of 1993.

Prices the second half of 1994 are likely to continue to average near to slightly below 1993 levels. Top managers should always be on the lookout for forward pricing opportunities or chances to reduce costs. Cattle cycle theory suggests that gradual feeder and fed cattle price declines can be expected during 1994 and beyond.

1994 Feeder Cattle Outlook

Allen C. Wellman



Allen C. Wellman

The July 1, 1993, U.S. total cattle inventory was estimated to be 110.6 million head, up 1 percent from a year earlier. It appears the inventory expansion is now likely going to go at a faster rate.

The number of heifers being held as beef cow replacements on July 1 was reported at 2 percent larger than last year's, but down from the 8 percent increase in July 1992. Most of these heifers are likely to enter the cow herd during the first half of 1994. This is likely to lead to a larger 1994 calf crop, growing feeder cattle supplies and increased beef production in the next few years.

Feeder cattle and calf prices are likely to be in a slight downtrend in 1994. Still, returns to cow-calf operations in 1994 probably will be sufficient to support further expansion in the beef cow herd and the overall cattle inventory.

Feeder Cattle Supplies

Although the current total feeder cattle inventory is larger than last year's, it is still relatively small, compared to the mid-'70s. Estimates of supplies of feeder cattle over 500 pounds were 1 percent larger than the year ago count. Supplies of calves under 500 pounds were also 1 percent larger than a year ago.

Imports during the year will increase feeder supplies. Shipments of feeder cattle from Mexico and Canada will add 1 to 2 million head to feeder cattle numbers.

Range, Forage and Feed Conditions

Feed grain prices continue to be important to feeder cattle and calf price levels. Relatively low corn prices last fall supported feeder cattle prices. For example, for 700 to 800 pound feeder steers, each 10 cents per bushel decrease in corn prices lowers the projected break-even selling price by about 40 cents per cwt. Or, to keep breakeven unchanged, feedlot operators could increase the amount paid for feeder steers by about 60 cents per cwt.

Should 1994 turn out to be a dry year, then rising feed grain prices by mid-year will push feeder cattle and calf prices into a steeper downtrend.

Prices

Prices for yearling steers in late 1993 were trading above the average for the 1987-92 period. As long as feed grain prices stay near the bottom end of their trading range, then early 1994 yearling steer prices may trade near $80 per cwt., well below year ago price levels. But if my prediction about downtrending fed cattle prices is correct, then yearling feeder cattle prices are likely to be under pressure as 1994 progresses. During the last half of 1994, heavy feeder steers may trade $7 to $10 under the upper-$80s prices recorded in late 1993.

Prices for 500 to 600 pound steer calves will have the same potential ups and downs as the yearling steers. Prices on heavy calves late in 1993 were averaging in the low $90s per cwt., just slightly above 1992 prices. Early 1994 seasonal strength may hold prices in the low $90s but steer calves are likely to be under modest downward pressure if fed cattle prices weaken in the late winter. Prices for 500 to 600 pound steer calves during the last half of 1994 may average $4 to $8 per cwt. below 1993 levels.

Possible uptrending feed grain prices or falling fed cattle prices by mid-1994 will change the feeder cattle and calf outlook from downtrending to negative.

Feeder cattle and calf marketing plans should be continually updated in 1994. Marketing strategies, including retained ownership, should be evaluated as market prices and production costs change.

1994 Slaughter Hog Outlook

Allen C. Wellman

Allen C. Wellman

Hog inventory reports have confirmed the hog expansion that started in 1990 moderated during the last half of 1993. Cash Omaha slaughter hog prices ranged from near $40 to just over $50 in 1993. Hog prices averaged about $45 per cwt. for the year, up about $3 per cwt. from 1992.

Supply Forecasts

Recent hog and pig reports suggest that inventories may continue to increase moderately in 1994. Estimates are that hog numbers may increase 1 to 2 percent the first two quarters of 1994. It appears likely that the last two quarters of 1994 may be up slightly compared to the second half of 1993.

Hog producers will be closely watching corn prices in 1994. Lower feed costs early in the year may encourage producers to increase farrowings or feed market hogs to heavier than normal weights. Market weights for slaughter hogs continue to increase. Average weights are near 250 lbs. per market hog, up from 239 lbs. ten years ago.

The structure of the hog industry continues to undergo noticeable changes. Generally there are fewer and larger firms. In many cases the construction of new very large hog operations are in non-traditional hog producing areas. States with no corporate farming laws have seen the most construction. North Carolina is the fastest growing hog producing state, Missouri is the fastest declining state.

How these structural changes impact on hog supplies, during the expansion and liquidation phases of the hog industry, are yet to be determined. But it seems reasonable to suggest that the managers of these large hog facilities are less likely to adjust hog numbers to changes in market prices. Especially if the facility is owned and operated by a corporation that is vertically integrated into the packing and retail side of the industry.

Demand Prospects

Pork demand has remained remarkably strong during the last two or three years. Total per capita meat supplies are record large but pork demand remains steady to slightly improving. Pork promoters are suggesting that opportunities exist for expanding the market for pork. Some of this expansion may take place in the U.S. but pork exports to the world market may hold the most promise.

Marketing Plan

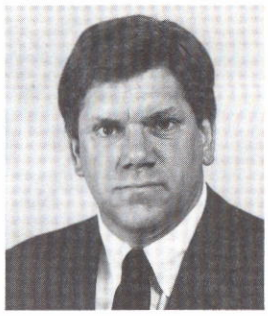
Steady to slightly increasing market hog prices often lull some producers into inaction. Producers must watch for forward pricing opportunities that achieve pricing goals and reduce price risk. The objective of your marketing plan strategy is to attain monthly-yearly average selling prices that are $3 to $5 per cwt. higher than average cash prices reported at your local market.

Price Forecasts

Cash hog prices in 1994 are expected to trade near 1993 levels. Prices in the first half of the year should average in the low-$40s. It is possible that the lowest cash prices of this current hog cycle may occur in the third quarter of 1994. Prices for the second half of the year may average in the lower-$40s. Hog producers' production decisions for the second half of 1994 will depend on production cost and market hog price trends in the first half of 1994. At midyear feed grain production and price prospects, supplies of competing meats and pork export levels also will be influencing the market.

Nebraska's Role in the Changing Pork Industry

Jeffrey S. Royer



Jeffrey S. Royer

The structure of U.S. pork production has changed dramatically in recent years. Production has been shifting rapidly from small, independent producers to fewer and larger operations that produce hogs under contract for processors. Although total production has been increasing, the number of hog farms has dropped from about 900,000 to 250,000 during the past two decades. Experts predict a continued decline to 100,000 farms by the end of this decade. These changes and their threat to the family farm have spawned debates in several hog producing states about appropriate public policy.

The restructuring has been driven by increased consumer demands regarding health, nutrition, and convenience, coupled with technological advances in genetics, information systems, and disease control that have improved production efficiency, consistency, and quality. Because the new technologies require substantial capital investments, the greatest cost savings are earned by large producers, some capable of producing more than a half million hogs annually. Faced with fewer, larger producers, processors have begun to rely more on contract production and vertical integration to ensure steady supplies of hogs and to coordinate product characteristics with consumer preferences.

The trend toward greater concentration in pork production threatens the survival of smaller, independent producers. As more of the industry's processing capacity is met by contract production and vertical integration, the market access of independent producers will be reduced. Because of strong competition from other meats, particularly poultry, some efficiency gains in the pork industry will be passed to consumers in the form of lower prices. As prices fall, smaller, less efficient producers will fail.

Livestock producing states have tried to protect small producers by restricting corporate farming or regulating contract production and vertical integration. Nine Midwest states, including six of the 10 largest pork producing states, have enacted corporate farming laws. In 1982, Nebraska voters authorized a constitutional amendment, commonly known as Initiative 300, that prohibits nonfamily farm corporations and limited partnerships from owning, keeping, or feeding animals for livestock production.

Because of these restrictions, large pork firms have been forced to establish new production and processing facilities in other states with more hospitable legal climates. Recent growth in pork production has occurred in the South, Southwest, and West, including nearby Colorado, Oklahoma, and Wyoming, where production has been historically low. Nowhere has this growth been more remarkable than in North Carolina. Since 1991, North Carolina has moved from seventh to fourth in the nation in total pig and hog inventories, passing Nebraska this past year. Current projections indicate North Carolina will be second only to Iowa by 1995. This increase is due to a number of factors, including favorable corporate and environmental laws.

Many rural communities will suffer economic decline because of the loss of small producers and relocation of the pork industry. However, new, large-scale hog operations provide potential for stimulating economic activity in other communities. An Iowa study estimates that production of 40,000 hogs adds more than $3 million to the value of locally produced grain and increases economic activity in neighboring communities by more than $6 million. Contract production may also provide an opportunity for small farmers to continue farming. Under contract production, much of the control over the production process is transferred to the processor. Independent producers may be reluctant to surrender this control, but contract production may be superior to off-farm employment as a supplemental income source.

Although the intent of corporate farming restrictions has been to preserve the traditional structure of hog production, states with these restrictions are powerless to prevent the important changes occurring in other states. The question is no longer whether corporate involvement and the growth in contract production and vertical integration can be deterred. Rather, it is whether states like Nebraska will continue to be important participants in a rapidly evolving industry.

Local Grain Basis: What Changes It, Outlook for 1994

James Kendrick

James Kendrick

Local grain basis is defined as the difference between the nearby futures contract and the cash bid price from a buyer—usually an elevator. Assume it is mid November. December is the nearby corn futures contract. Assume further that DEC corn futures are quoted at 242, and the local elevator has posted a bid price of 224 for corn delivered to the elevator. The basis is 18 under the DEC.

Thus, the price a corn seller receives is determined by the futures price and the local basis. Futures price is determined by global supply and demand conditions. Futures prices can, and do change dramatically. Floods, drought, entry or exit of a major buyer have combined to drive corn futures above 350 to below 160 during the past 10 years. Predicting what corn price will average during any year is difficult since predicting major changes in supply or demand involves a myriad of variables.

Local basis is determined by two criteria: the location of the buyer relative to areas of major demand; and the local demand *for* and supply *of* storage space. Basis can, and does change between years and seasonally. Yet, changes in local basis are less dramatic than changes in futures price. In eastern Nebraska, local corn basis has varied from two to thirty-five cents under the nearby futures in recent years. Predicting local basis is easier than predicting prices since the variables that alter basis are few and are locally, not globally determined.

The effect of location: An elevator located close to Chicago has minimal transportation costs to lake export terminals. Here, close location to a major demand point translates into a strong basis, and a typical harvest bid price for corn might be around five cents *under* the nearby futures. An elevator close to New Orleans also might have minimal transportation costs to export terminals on the Gulf. Yet, the majority of corn exported from the Gulf originated in the Midwest, and incurred transportation costs in movement down the river systems. Here, the major demand area is located some distance from Chicago—the reference location for pricing grain futures. In this situation, bid prices for corn in November would typically be 20 or more cents *over* the nearby futures.

Elevators in eastern Nebraska are neither close to the futures pricing point of Chicago, nor close to major exporting terminals. Thus, bid prices at harvest *normally* are considerably below the nearby futures price.

The location effect on basis is not constant. The construction of a sub-terminal elevator with capacity to load a 100 car unit train would reduce the cost of transporting grain to major demand points. Accordingly, the local basis would strengthen. Closure of the river system to barge traffic (because of either high or low water levels) would shift grain movement to rail or trucks—both more expensive than barges. Accordingly, elevators on the rivers would weaken their basis bids to cover the increased transportation costs.

The effect of available storage space relative to the quantity of grain seeking storage: At harvest, increased grain sales to local elevators often fill storage space to capacity. Elevator management signal their unwillingness to accept additional grain by lowering their cash bid price relative to the futures price, i.e., weakening the basis. As the glut of harvest wanes, elevators move grain forward in the marketing channels to terminal elevators, feedlots, grain processors, etc. This movement of grain from the elevators increases the local storage space relative to the grain seeking storage. Now, management signals their willingness to accept additional grain by raising their cash bid price relative to the futures price, i.e. strengthening the basis.

Other factors that tend to weaken basis include: abandonment of elevators, decrease in local livestock, a huge harvest, or a reduction in the availability of transportation. Local basis would strengthen with an increase in local livestock feeding, building of additional local

storage space, a disastrous harvest, or the availability of less costly transportation.

Outlook for 1994:
1)With an expected reduction in the size of Nebraska's corn and soybean crop in 1993 compared to recent years, 2) barge movement on the Missouri and Mississippi river systems likely to return to normal in the spring, and 3) Nebraska livestock numbers similar to recent years, local basis in 1994 is likely to be stronger i.e., narrower than in 1993. Since a change in basis is determined by changes in local conditions, monitoring those factors that affect basis should provide a hint of likely movement in basis levels.

Note: Each year, Lynn Lutgen compiles and publishes basis history for many Nebraska locations. For information on the 1994 publication date and purchase price, contact Dr. Lutgen at (402) 472-3406.

Future Sources of Agricultural Marketing Information

Daryl E. Ellis

Daryl E. Ellis

New communications and computer technology now provide the ability to search worldwide for agricultural information. The underlying computer network that makes this possible is called INTERNET. INTERNET provides access to computers worldwide for almost instantaneous delivery of documents or personal messages. In addition, many cable-TV and phone companies are aggressively marketing similar technology for use in the home entertainment industry.

In early 1993, there were over 35,000 computer systems connected to INTERNET, with 51 percent of the registrants having commercial interests. Many of Nebraska's two and four year state colleges and universities, school districts, and state agencies currently have direct access to INTERNET. In addition, the general public can indirectly access INTERNET through services provided by commercial companies and public agencies.

How can Nebraska's agriculture benefit from this new technology? One obvious benefit is the potential to access and obtain timely marketing information. USDA crop and livestock production and price reports, U.S. and world agricultural news summaries, weather reports, legislative or political events, and special topic forums are already available. Eventually, the system will allow access to large CD-ROM libraries, or on-line searching of world newspapers and magazines. The potential for information transfer is tremendous as the system evolves and agencies begin to design and format their information for electronic transfer.

Various private and public entities have developed tools for searching and accessing information. The most commonly used tools today include electronic mail, gopher, and telnet. These navigation tools are generally provided by INTERNET access providers.

Electronic mail allows the user to send and receive messages. Messages may be distributed to an individual's e-mail address or processed by special e-mail software. Two unique features of e-mail include the ability to participate in group conferences or request specified reports. Discussion groups are often organized around special topics. For example, a discussion list exists for the dissemination of latest events and news summaries on farm policy and trade agreements. Other uses of e-mail might include subscribing to USDA reports, requesting the latest Situation and Outlook report, or obtaining a list of hay buyers and sellers in the upper Midwest region.

Gopher is another tool used in navigating the many potential sources of information. Gopher is a menu driven software that allows the user to select any host computer worldwide and view or download selected files. Literally, thousands of computers are now accessible via gopher and types of information ranges from university class schedules, top ten movies, economic business reports, computer software, weather reports, and the U.S. Federal Register. As an example to the magnitude of gopher capabilities, a Western Nebraska user can access a computer located in Switzerland, select appropriate menu items and obtain current dry edible bean prices in Nebraska.

The third common tool in accessing INTERNET sources is Telnet. Telnet is similar to traditional phone modem communications, however speed and efficiency is greatly enhanced. Numerous systems have been organized to accumulate and disseminate information relevant for a particular geographic region. However, more excitedly, is the development of databases providing information on countries in the Central and South American region. Hopefully, these systems will provide current and timely information on foreign agricultural production, trade, and policy.

For the true benefit of INTERNET to be realized in agricultural marketing, the massive quantities of available information must be correctly interpreted and utilized. Only the user of the information can make this happen!

Agricultural Land Market Conditions and Trends

Bruce Johnson

Bruce Johnson

Stability has characterized most agricultural real estate markets across the state during 1993. Market participants were cautious in their decisions, and land values in most localities were either unchanged or moving slightly upward during the year. Where increases occurred, the percentage change over year-earlier levels appears to have been in the 2 to 4 percent range. As for 1994, look for little change in value. That was the general response of a panel of some 40 appraisers and other real estate professionals from around Nebraska who shared with us in late 1993 their perspective of local land market conditions.

Regarding other patterns in recent months, the panel indicated that the volume of land for sale had tended to be below average in recent months as was also market activity. Many of the reporters noted there was a stronger demand for above-average quality parcels whether it be irrigated or dry cropland. Apparently, buyers are factoring in conservation compliance requirements and preferring the higher quality land. In addition, the demand for pasture and grazing land has tended to be somewhat stronger than that observed for cropland, which has resulted in somewhat larger percentage increases in value for this type of land.

Two key elements have been impacting the market for agricultural real estate in recent months — uncertainty due to recent weather extremes, and current interest rates which are the lowest level of the past quarter century.

Adverse weather conditions were pervasive across Nebraska during 1993, with the farm income effects ranging from mild to disastrous. In turn, buyer mood in the market has been more cautious than otherwise. While a period of more normal weather conditions may do much to restore buyer confidence, nevertheless, 1993 was a sobering reminder of the power of nature and the need to respect it in both our use and investment in land. As an immediate spinoff of this, look for 1994 cash rental rates to back off a bit from 1993. And in the longer run, a more deliberate effort to factor in weather risk and uncertainty will be a healthy adjustment to agricultural land market dynamics in the years ahead.

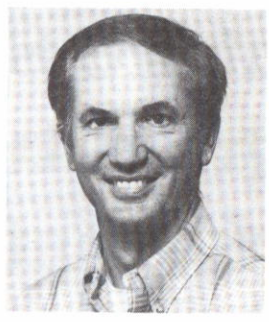
The other major force recently impacting the land market — interest rate levels — has had a "double-barrelled" effect. Mortgage interest rates have fallen 30 percent or more from levels of just a few years ago. This has enhanced debt-service ability, some of which has, no doubt, been factored into higher bid levels for agricultural real estate. Moreover, the ability to lock in a relatively low rate on a long-term (15- or 30-year) mortgage in the face of potential future jumps in interest rate levels makes the incentive to purchase now even greater.

But that is not all of the interest rate story. Of equal if not greater importance is the fact that investors now see much lower rates of return on alternative investments. As one of our panelists remarked, "Compared with a 4 percent return on a CD, investment in farmland looks better all the time."

In addition to these two major and counterbalancing forces of weather-related uncertainty and low interest rates, our agricultural real estate markets are being impacted by other factors as well — factors which will undoubtably continue. One force is the international trade situation and its potential effect on agricultural exports. The ratification of NAFTA by the U.S. Congress is not assured, while other previous export markets, such as Russia, remain precarious. In a state like Nebraska with more than one out of every three cropland acres producing for a U.S. export market, the stakes are high.

Another force beginning to be weighted into our land market is upcoming federal farm bill

Impacts of the Budget Reconciliation Act of 1993 on Nebraska Taxpayers



George H. Pfeiffer

George H. Pfeiffer

Congress passed the Budget Reconciliation Act of 1993 this summer by the barest of margins. In fact, a tie vote in the Senate was broken by the Vice President. The closeness of the margin and the degree to which special interest of all stripes attempted to influence the outcome indicate the contentiousness that tax bills create in our elected bodies. The changes in the tax code enacted will affect a few Nebraska taxpayers profoundly, but will be hardly noticed by others.

The change most likely noticed by all was the increase in the federal motor fuels tax, which increased by 4.3 cents last October 1. A "typical" Nebraska driver going 10,000 miles per year will see an increase in the gas tax paid of about $20 annually. Over the road tractor trailer operators, truck shippers of grain, and other operators of transportation equipment using gasoline and diesel fuels are more substantially affected. Farm and ranch non-road fuel use is not affected.

Very high income taxpayers will see their 1993 tax rates increased over the maximum marginal rate of 31 percent effective in prior years. Beginning in 1993, married couples with taxable incomes in excess of $140,000, and singles with taxable income in excess of $115,000 will face a 36 percent marginal tax rate. Both will face a marginal rate of 39.6 percent on income in excess of $250,000. In addition, allowable itemized deductions begin to decrease when adjusted gross income exceeds $108,450, which slightly increases the effective marginal tax bracket still further.

The maximum tax rate on long term capital gains has not changed. The tax charged on long term capital gains remains the same as the ordinary income tax rate with a maximum rate of 28 percent. The fact that the ordinary income tax rate has increased for high income individuals while the long term capital gains rate has remained unchanged increases the attractiveness of long term gains for some. Tax strategies that effectively convert ordinary income into capital gains may again become attractive. Short term capital gains will continue to be taxed as ordinary income, albeit at the higher tax rates imposed on larger earnings.

Farmers and other small business people face some positive and some not so positive changes. Effective with 1993, up to $17,500 in capital asset cost can be written off in the acquisition year as a Section 179 deduction in addition to ordinary depreciation. The previous limit had been $10,000. Depreciation for non-residential commercial building constructed or completed after 1993 will be claimed over a 39 year rather than 31.5 years. Farm buildings are not affected—they will continue to be depreciated over 20 years. Medical insurance deductions for self-employed families were restored as in previous years, as long as coverage is also provided to employees. The maximum tax rate on large corporations increased to 35 percent in 1993, but only on corporations earning more than $10 million. Smaller corporations will pay at the same rates as in prior years.

Higher income social security recipients will also notice a change in the taxation of their benefits. Married social security recipients with modified adjusted gross incomes in excess of $44,000, and singles with modified adjusted gross income in excess of $34,000 will find that 85 percent of their social security benefits over the threshold income levels will be subject to income tax. Taxability of benefits for social security recipients earning less than these threshold levels has not changed.

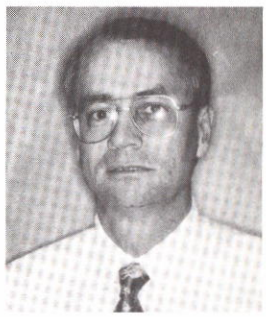
In summary, the changes to the tax code enacted in 1993 will significantly affect only a few Nebraska taxpayers. We will all pay a slightly higher tax on motor fuels, and a few high income taxpayers will pay a significantly higher income tax. The modest aggregate increase in Federal tax collections is therefore likely to have a negligible effect on the federal debt.

legislation. Budget deficit problems may threaten continuing farm price and income support programs, while mounting environmental concerns may place more limiting conditions on land use. Both add perceived risk to farmland ownership.

Here at the state level we can add another force — that being high property tax levels that are factored into the land investment equation. And with the propensity for the federal government to shift greater responsibilities to state and local governments, the potential is certainly there to see local property tax rates go even higher.

Whatever the future holds, it certainly will need to be considered with a "sharp investment pencil." Yes, the agricultural land market will remain a market of opportunity, but also a market driven more by reasoned decision-making. Land value trends have already begun to settle into this more deliberate mode, and 1994 is shaping up to be a continuation.

Adjusting Plantings, Farm Program Participation and Crop Insurance Coverage in 1994



Roger Selley

Roger Selley

Farmers are supposed to be accustomed to weather calamities, but the late freeze in 1992 and the wind and flood damage in 1993 have shaken some of the steadiest. Several years of good yields had lulled some of us into believing they were almost a certainty. In addition, many farmers experienced yield losses to wind damage in 1993, for example, that had no parallel in three generations of farming. This suggests we should always consider crop failure as a possibility, even though we may not have the experience to anticipate what might cause the failure. We can still consider the consequences and strategies designed to minimize the impact of the failure.

A crop failure can be viewed from at least three somewhat different perspectives: 1) What would be the impact of a crop failure upon the business? 2) What would it cost to reduce the impact? and 3) What would it cost to try to avoid the failure? In some cases a crop failure would not cause a failure in the business and may not require any adjustments in the business. However, it may still be good business to adopt some practices designed to reduce the impact of the failure. For example, the subsidy of all risk crop insurance premiums results in average indemnity payments exceeding premiums. As another example, wheat and feed grains program participation can result in average deficiency payments that exceed the income foregone from the average set aside. In these examples, even though the business may not be at risk if the crop or market fails, profits may be increased under participation depending upon the farm-specific yields and costs.

Where a business would be at risk of failure if a crop or market failure occurred, it may be desirable to buy the insurance or participate in the farm program. Even though average profit may be reduced, the business should be more likely to survive.

An alternative to or an addition to buying insurance or farm program participation is to seek to avoid the failure. For example, soybeans sustained essentially no damage from the 1992 late frost or the 1993 wind storm. The problem is that soybeans are susceptible to other hazards, e.g. the bean leaf beetle. A natural strategy is to diversify. The farm program flex acres makes it easier to diversify and in some cases may make it possible to follow a rotation that is more profitable than continuous corn.

When looking for changes to avoid crop failure, it is helpful to consider the following classifications of crop failure: 1) time specific (most weather related disasters), 2) crop specific (some weather related disasters, most insect and disease problems), and 3) cultural practice specific (planting dates, rotation and tillage systems, row direction, variety, etc.). Part of the challenge is to determine a balance between diversification and productivity. The major part of the challenge is to identify viable practices that will help avoid crop failure. For example, 1) having crops at various stages of growth at any point in time, 2) planting different varieties, 3) planting some fields north-south and some east-west, 4) rotating crops, 5) producing some conventional and no-till rather than making a complete switch. Each of these practices have some costs or reduced yields associated with the compromise. The diversification they offer will reduce exposure to some causes of crop failure.

Crop Insurance in 1994

H. Doug Jose

H. Doug Jose

Changes in the multiple peril crop insurance (MPCI) program in 1994 will make it more flexible, more equitable for low-risk growers and will enhance the actuarial soundness. These changes are:

Actual Production History (APH). Guarantees will be based on a minimum of four years of actual records, building to 10 years. With four or more years of records, transitional yields (known as T-yields) will no longer be used to calculate a grower's approved yield. T-yields are calculated by adjusting ASCS program yields according to the number of years of actual records available. T-yields will now only be used if less than four years of certified yields are available. The APH yield will be computed as the simple average of the actual yields for four or more years.

New farmers get special considerations. For example, if new farmers can demonstrate they were closely involved in the farm's production that was certified under a previous operator (such as a family member), those records may be used to establish the APH for the new farmer.

Coverage Levels. Farmers can choose to cover 35, 50, 65, or 75 percent of their approved yield. Price elections from 30 to 100 percent of the established price election are available or the market-based price can be selected. The price election is used to calculate indemnities and premiums paid.

Group Risk Plan. In spring 1993, FCIC began a pilot program called the Group Risk Plan (GRP) on soybeans. The GRP program was expanded on a pilot basis to wheat and forage in selected counties in fall 1993. No counties in Nebraska were included in any of these pilot programs. In spring 1994, the number of counties included in the soybean program will be expanded and a corn GRP program will be introduced.

GRP is based on the premise that most individual farmers in a county will have low yields when the yield for the whole county is low. All farmers enrolled in the plan will be paid an indemnity if the county yield falls below a selected level, regardless of their individual yields. Farmers can buy more protection than the county average, up to 150 percent, for example. This allows farmers with higher yields than the county average to purchase adequate protection. The objective of the GRP is to minimize moral hazards, and provide more equitable policies for low risk growers. GRP also reduces the administrative costs since no loss adjustment is necessary. Also, no yield records are required. The counties selected for eligibility in 1994 will be based on the length and quality of historical yields available for the county. Where GRP is offered, regular individual farm-based MPCI will also still be available. A combination of GRP and MPCI may also be available.

Social Security Numbers. Beginning in 1994, policy holders must report their social security numbers (SSN) and/or employer identification numbers (EIN). This allows FCIC to track policy holder experience from year to year to design more equitable premiums and to reduce program abuse.

Supplemental Policies. Many private insurance companies now offer supplemental and stand alone coverages that enhance the price election and coverages of the basic MPCI policy. Growers need to consider the usefulness of these supplemental policies for their situation and risk preferences.

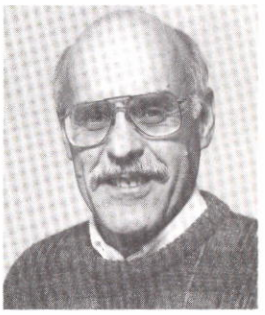
Nebraska's CRP and Producer Intentions for Future Use

Richard T. Clark, Steven L. Elmore, Maurice Baker, and Bruce Johnson

Richard T. Clark

Steven L. Elmore

Maurice Baker



Bruce Johnson

Nebraska producers have enrolled 1.39 million acres (includes 1993 which is still unofficial) of cropland into the Conservation Reserve Program (CRP). Most contracts were for 10-year periods. Enrollment began in 1986 so the first CRP contracts will expire in October 1995 unless Congress acts to extend some or all of the agreements. Given the federal budget concerns, widespread renewal of the CRP contracts does not seem likely. When the contracts expire producers will decide the future use of the CRP land.

Many factors will influence future use CRP land. Farm programs, crop and livestock prices, conservation attitude, land price and personal situations (e.g. retirement or debt load) are some of those factors. In early 1993, we asked Nebraska producers with CRP land their plans for future use of this land given that contracts would not be extended. From our random survey, responses were received from producers controlling nearly 226,000 acres or over 16 percent of Nebraska's CRP land. We recognize that plans can and will change between now and contract expiration. Nevertheless, this snapshot of producer thinking in early 1993 will be helpful to producers and policy makers for formulating future actions with respect to the affected land. The survey sample was stratified by the Agricultural Statistics Districts (ASD, Figure 1) used by the Nebraska Agricultural Statistics Service so we could identify differences in future use by geographic areas of the state. Table I summarizes respondents' plans when the contracts expire.

The last two columns of the table show the acres of CRP in each ASD that is controlled by those who responded to the survey, and the total acres enrolled in each ASD. The "enrolled" column does not include acres enrolled during the 12th sign-up which were for 1993.

In all areas of the state, at least 30 percent of the CRP land is projected to stay in grass. We did not ask the intended use of the grass such as for haying and/or grazing. Statewide, nearly 36 percent of the acres controlled by respondents would remain in grass while one-half would return to crops. Respondents did not have plans for 13.4 percent of the CRP land they controlled. Those without plans represent about 30 percent of the respondents. Apparently, the average producer with plans controlled relatively more CRP land than the average producer without plans. Producer plans for returning CRP to

Table I. Nebraska Producer Plans for CRP Upon Contract Expiration and Acres in Sample and Enrolled Through 1992 by ASD

Plans	*Keep in Grass*		*Plant to Crops*		*No Plans*		*Sample*	*Enrolled*
ASD	*acres*	*%*	*acres*	*%*	*acres*	*%*	*acres*	*acres*
N West	18,902	30.1	33,512	53.4	10,371	16.5	62,785	386,847
North	18,226	49.6	16,713	45.5	1,772	4.8	36,711	117,669
N East	13,015	31.4	25,406	61.3	3,047	7.3	41,468	300,490
Central	3,043	30.9	5,037	51.2	1,765	17.9	9,845	76,488
East	2,545	31.1	4,879	59.6	758	9.3	8,182	94,424
S West	11,057	47.5	6,303	27.1	5,912	25.4	23,272	129,399
South	4,163	41.8	4,830	48.5	965	9.7	9,958	63,295
S East	10,162	30.4	17,661	52.8	5,606	16.8	33,429	197,436
State	81,113	35.9	114,341	50.7	30,196	13.4	225,650	1,366,048

crops was quite different across the state. Producers plan to return only about one-fourth of the CRP land to crops in southwest Nebraska whereas over 60 percent of CRP land in northeast Nebraska is planned to be cropped.

Whether or not producers will follow through with current plans must remain a matter for conjecture. Nebraska producer responses are, however, consistent with producers in other Great Plains states where surveys have been conducted. For example, producers in North Dakota plan to return 52 percent of their CRP acres to crops while 48 percent of Montana's CRP is likely to return to crop production. Both of the latter surveys were conducted in 1992.

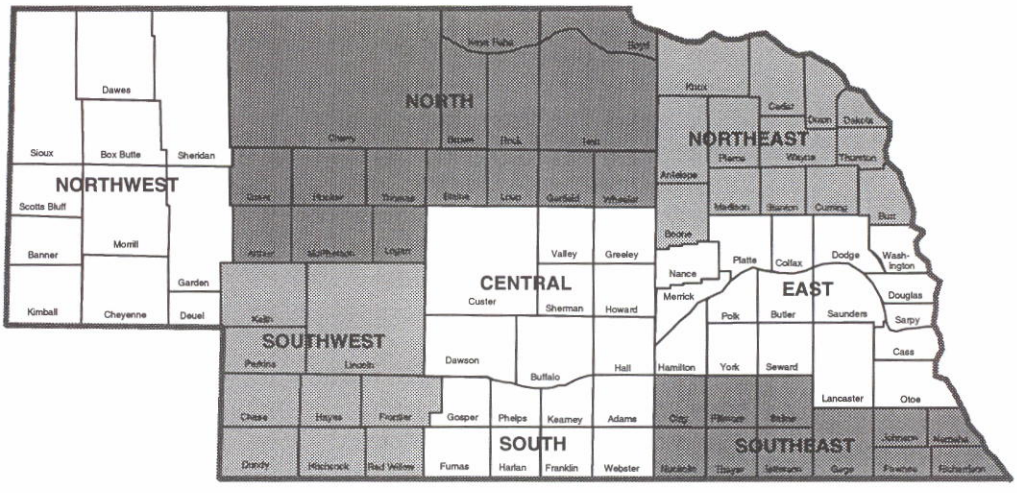
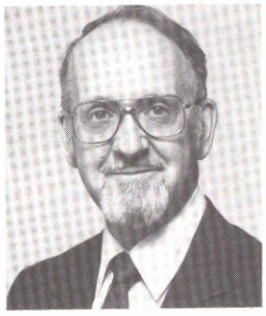


Figure 1. Nebraska Agricultural Statistics Districts (ASD).

Payments Required for Renewal of Nebraska CRP Contracts

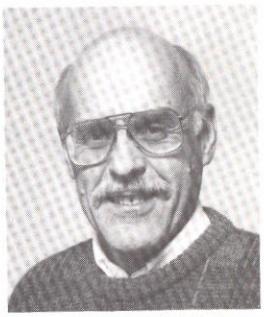
Steven L. Elmore, Maurice Baker, Richard T. Clark, and Bruce Johnson

Steven L. Elmore



Maurice Baker

Richard T. Clark



Bruce Johnson

The first Conservation Reserve Program (CRP) contracts will expire in October 1995. This is just over eighteen months away. Decisions are being made now as to the future use of these lands. Many factors may influence how this land will be used after the contracts expire, but two of the most influential are: 1) market prices for grain, and 2) size of government payments to keep the land out of crop production.

From 1993 survey data for Nebraska CRP participants, we estimated the proportion of land which would remain in grass at varying levels of government payment if wheat was $2.75 and $4.25, and corn was $1.75 and $3.25. (These cash prices are the extremes of each range and do not imply these prices will prevail when the contracts expire.) Specifically, the respondents were asked how much of a CRP payment they would require to keep all of the land in permanent vegetative cover for five more years at the various commodity prices. The results from this survey are summarized below.

For those respondents with plans for future use of CRP land, virtually no land will remain in grass with annual payments under $20 per acre for wheat land and under $30 per acre for corn land. In contrast, almost all corn land would stay in grass when the payments are $100 per acre per year. However, only about 75 percent of the wheat land would remain in grass even with annual payments of up to $100 per acre when wheat price is $2.75 per bushel. There was no increase in the number of wheat acres remaining in grass with payments above $70 per acre year when the market price of wheat is $2.75 per bushel. (See Figures 1 and 2.)

Wheat. The price of wheat makes little difference in the size of payments necessary to keep a given percentage of the wheat land in grass as long as payments are under $70 per acre year. Payments above this level resulted in more land remaining in grass when prices are $4.25 per bushel but had no effect on the proportion of land in grass at the lower wheat price. Payments as high as $70 per acre per year are only received in eastern Nebraska where wheat is not the crop of choice.

Corn. The size of payment necessary to keep corn land in grass varies with price of corn. With payments of $70 per acre year, only about 50 percent of the land will stay in grass if corn price is $3.25 while over

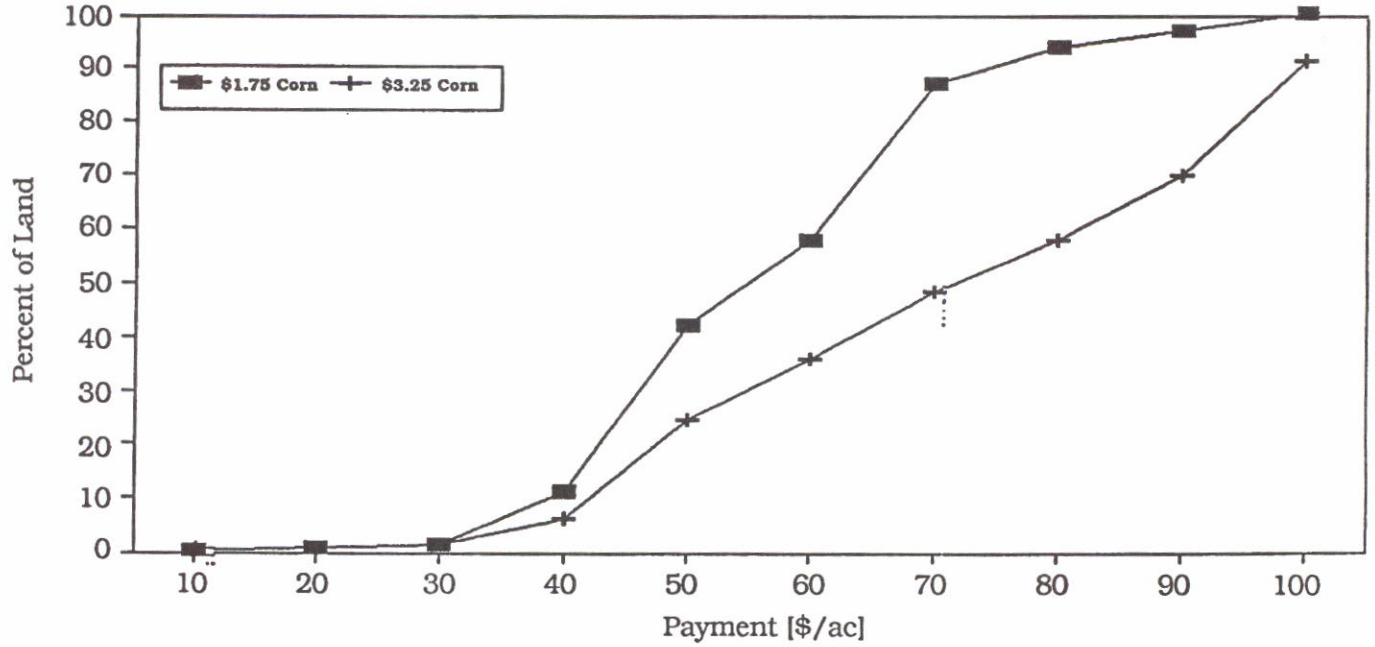


Figure 1. Payments needed to keep land in grass with different corn prices.

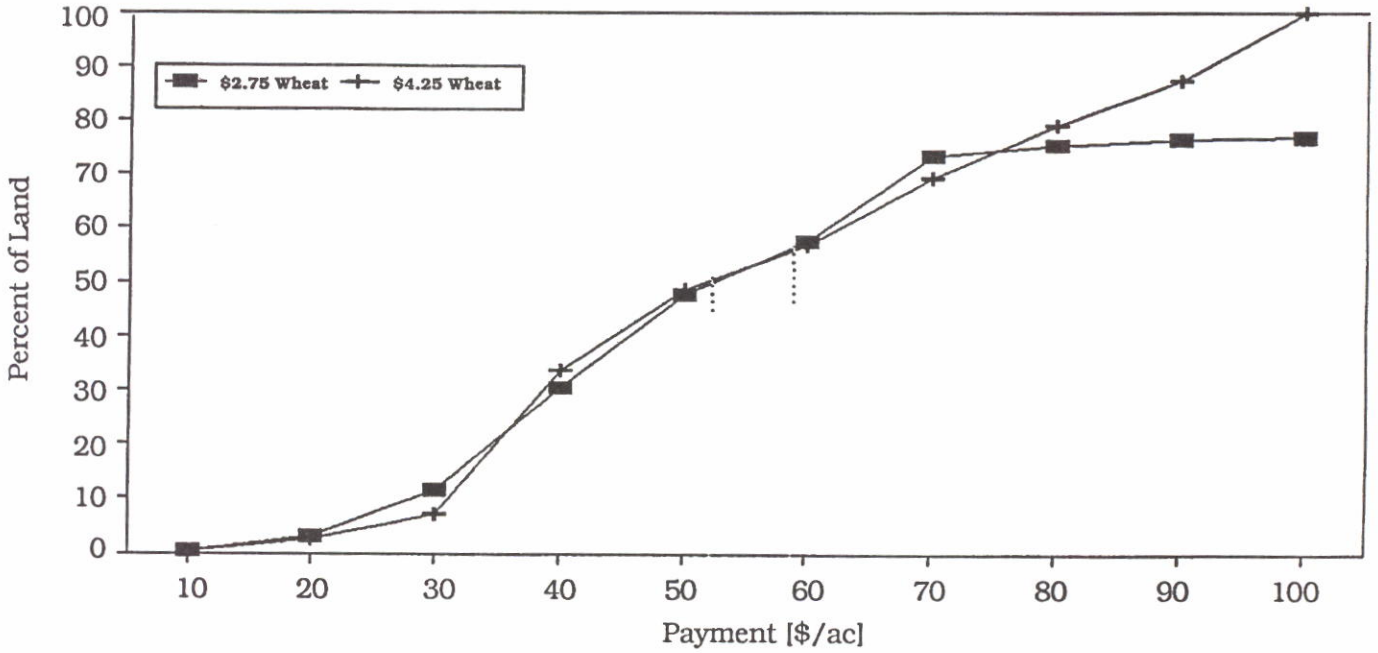


Figure 2. Payments needed to keep land in grass with different wheat prices.

85 percent of the land will stay in grass with $1.75 per bushel corn. If we wish to maintain 75 percent of the CRP land in grass, it will be necessary to pay over $90 per acre year when corn is $3.25 per bushel and only $60-70 per acre year with $1.75 per bushel corn.

The future use of CRP lands is still uncertain and only in time will we know what will actually happen, but commodity prices and government payments will have an impact. Should future commodity prices be at the low end of the range because of low demand, a higher proportion of the CRP land will remain in grass than if commodity prices were higher. Likewise, more would stay out of production with high government payments than if they are low. It requires larger payments to keep corn land in grass when the price of corn is high than when it is low. The price of wheat does not appear to affect the size of payment required to keep land in grass.

Solid Waste Management: Debatable Issues

Wanda Leonard

Debatable solid waste issues—there are many! But the fact that people generate a lot of trash and the fact that waste will be handled differently in the future are not among the debatable issues. What is debated is waste site disposal designation and mandatory participation.

One debatable issue is whether waste can be directed to a specific place for disposal. That is, can a local governmental entity tell a person to dispose of their waste at a specific site? This is called "flow control" in the trade. And can a person be made to pay a common fee for disposal regardless of their use of the facility or system? The answers to these questions will impact waste management decisions in Nebraska in the months ahead.

Flow Control

Often officials charged with finding a solution to the solid waste issue believe it is economically advantageous to require everyone in the community or county to utilize a specific landfill or transfer station. Local officials may secure a better rate by guaranteeing a volume or by guaranteeing a geographic area to be served. Plus, the governmental entity can be satisfied that it is providing the facility and/or system as required by law. The designated facility owner/operator is satisfied because a certain dollar amount can be anticipated. This is particularly important to operators who have or are acquiring large debts to build or upgrade a facility.

Some individuals adamantly oppose flow control. They believe that their freedom and individual choice is being infringed. They believe a specified hauler, transfer station, or landfill owner is gaining an unfair advantage over other service providers and overall that flow control is an infringement of interstate commerce and their freedom of choice. No one tells them where to buy their groceries, or obtain auto service, therefore, no one should be allowed to tell them what solid waste facility to use.

Flow control has been the subject of much litigation, and the U.S. Supreme Court has agreed to hear a flow control case during the current term. The case involves an ordinance enacted by Clarkstown, New York, which requires all haulers to dispose of garbage generated within the community at the municipality's transfer station. A local hauler contends an unconstitutional infringement of interstate commerce.

Refuse as a Utility and Mandatory Fee Assessment

Refuse as a utility and mandatory participation generate frequent debate. Some people believe without a doubt that refuse disposal is and should be treated as any other utility. They contend that garbage service is very similar to sewer and/or water service, and further everyone should be required to pay, as waste disposal ultimately can affect everyone's health. Others disagree. They contend that waste has not been declared a utility, there are no sanctions to be imposed, and people cannot be required to pay.

There are municipal and county governmental units that believe mandatory participation via mandatory fee assessment is the best deterrent to ditch dumping. Some community officials include garbage with water and sewer in the municipal utility billing. There are citizens who argue that they do not want to participate in waste collection. They do not want waste disposal as part of their utility billing, and they say that they will refuse to participate and pay assessed fee.

So the debate is on—does the local governmental body have the right to direct waste to a particular facility? Can fees be billed across the board? Would mandatory participation ward off ditch dumping? The answers to these questions and the decisions subsequently made will most certainly have an impact on our state's management of solid waste.

Water Policy Developments in 1993: Implications for Agriculture

Raymond J. Supalla

Raymond J. Supalla

Several important water policy actions affecting Nebraska agriculture have recently occurred at all levels of government. In 1993, the Nebraska Game and Parks Commission filed for instream flow rights on the Platte; the Nebraska Department of Environmental Quality established a third special protection area and studied the need for two others; agreements were presented to the U.S. Supreme Court concerning allocation of North Platte water between Nebraska and Wyoming; the Nebraska Supreme Court upheld the decision by the Director of the Department of Water Resources to deny a permit for diversion of Platte River water for irrigation in the Landmark case; the Central Platte NRD filed for permits to divert and store Platte River water for groundwater recharge; and the Federal Energy Regulatory Commission (FERC) continued to search for a solution to competing interests regarding management of Lake McConaughy; and the Nebraska Unicameral passed nine bills and six resolutions which addressed water issues. The key water related bills passed by the Unicameral included: LB301, which allows municipalities to obtain surface water appropriations to recharge well fields; LB439, which provides the authority to require reduction of irrigated acreage as a water management tool in control areas; LB588, which provides for state assumption of the Federal Insecticide, Fungicide and Rodenticide Act (FIFRA) that was previously administered by the U.S. Environmental Protection Agency.

The Nebraska Unicameral also adopted several water related legislative resolutions which are indicative of emerging issues and possible future legislation. These included: LR145, a resolution to study the need for and the cost of water quality programs in NRD's; LR146, a resolution to study the issue of water contamination in the state, water testing requirements and water quality program administration; LR149, a resolution to explore the issue of integrated management of groundwater and surface water in the state; LR241, a resolution to study state laws and policies relating to instream appropriations of water; and LR242, a resolution to study state laws and policies relating to environmental education.

Space does not permit describing and analyzing each of these policy changes and/or resolutions, but there are a couple of major themes which emerge that are of particular interest to agriculture: 1) instream flow demands and claims by upstream states have combined to put intense pressure on traditional agricultural uses of the Platte River; and 2) agriculture is expected to assume increasing responsibility for water quality improvements.

The increased demands for Platte River water reflect a continuing trend that has major implications for the agricultural sector. For many years it was reasonable to assume that as groundwater mining became more severe, surface water supplies would be developed to maintain the agricultural base. Although some additional surface water may be allocated to agriculture in future years, it seems likely that most of the unappropriated water will be allocated to instream or municipal uses. Agricultural needs may need to be met from existing groundwater supplies and from previously allocated surface water rights. This will require continued improvements in on-farm management and in some cases implementation of control area programs to restrict water use.

The water quality theme which emerges from recent policy actions is a more contemporary development that has or will affect virtually everyone in production agriculture. Many policies being implemented at the local, state and federal levels are focused on improved water quality through a more environmentally sensitive agriculture. Pesticide regulations, applicator training, and local area requirements for soil testing and fertilizer management are all manifestations of water quality concerns. The implications for agriculture concern not only the obvious changes in production practices, but also the need to participate actively in the policy process to prevent inappropriate policies, and the need to respond responsibly to those policies and programs which are sensible and necessary. Agriculture can be proud of the progress made to date, but additional effort is needed to insure that sound policies are passed and then effectively implemented in the field.

Must Farmers be Regulated to Maintain Water Quality?

Raymond J. Supalla

Raymond J. Supalla

Concerns over groundwater quality continue to intensify resulting in increased pressure on agriculture to reduce their contribution to groundwater pollution. Nitrates in excess of the public health standard have been found in 20 percent of all Nebraska wells and in 81 of 93 counties. Atrazine and other agricultural pesticides are also of concern in several parts of the state. What is being done and what must be done to deal with these problems? Some observers contend that extensive federal regulation by the U.S. Environmental Protection Agency (EPA) is needed and will eventually occur. Others believe that education, research and voluntary management changes will be sufficient to deal with groundwater pollution. The correct position probably lies somewhere between these two extremes and depends primarily on how agriculture responds to the water quality problem.

During the last few years, local and state government, the agricultural research community and agricultural producers have responded very aggressively to water quality problems. The Tri-Basin, Central Platte and South Platte NRD's have established water quality management areas. The Nebraska Department of Environmental Quality (DEQ) has established two special protection areas (SPA's), one in Nuckolls County and another in the Upper Big Blue NRD. The Institute of Agriculture and Natural Resources, in cooperation with USDA, has allocated millions of dollars to finding economically feasible ways of reducing pollution from agriculture. Perhaps most significantly, many agricultural producers have demonstrated a willingness to modify their production practices to meet environmental needs. This amount of activity by producers and by local and state government is impressive, but is it enough?

A study of producers in the Central Platte Valley found that over 85 percent were aware of water quality problems and were willing to modify their production practices to meet environmental needs. However, about 50 percent of all producers were still applying nitrogen at levels 20 pounds or more above university recommendations, this also means 50 percent were applying nitrogen at recommended or lower rates. Further analysis revealed that the major barriers to reducing nitrogen use and, therefore, decreasing nitrate pollution of groundwater were: 1) a widespread belief that the recommended nitrogen levels were inadequate; and 2) the difficulties and risks encountered when trying to precisely apply the recommended amount of nitrogen to all fields.

Progress to date and the findings of the Central Platte study imply that much can be accomplished without extensive regulations. The 85 percent of producers who have shown a willingness to consider changing production practices for environmental reasons are likely to respond positively to education and demonstration programs. Also, on-going research shows promise in facilitating reduced nitrogen use through practices which are often win-win in the sense that they are both environmentally sensitive and more economic. Some regulations may be needed, however, to accelerate change and to force compliance by the minority 15 percent of producers that appear unreceptive to making voluntary changes.

Nebraska can take pride in the progress made to date in addressing groundwater quality problems, but much remains to be done. There are good reasons to believe that water quality objectives can be met without draconian regulations or significant impacts on the cost of agricultural production, but the long-term task will not be easy. In many ways, the approach to the problem and the outcome rests in the hands of producers. Continued support for research and education and rapid producer adoption of new technologies will lead to a stronger more environmentally sensitive agriculture, but any reduction in these efforts may lead to inappropriate policies that are neither economically nor environmentally sound.

State Pesticide Regulations

J. David Aiken

J. David Aiken

Nebraska is the only state that does not administer the Federal Insecticide, Fungicide & Rodenticide Act (FIFRA) applicator certification and pesticide use enforcement program. Applicators currently are certified in Nebraska by EPA, and EPA enforces pesticide use regulations (i.e. pesticide label restrictions). EPA is now, in addition, requiring states to prepare state pesticide management plans (SMPs) as a condition for being able to continue using pesticides which contaminate a state's groundwater ("leachers"). Leachers will be prohibited in states not having an EPA-approved SMP for that particular pesticide. Only states administering the FIFRA user certification and enforcement program are eligible to prepare SMPs. Legislative Bill 588, adopted in 1993, authorizes the Nebraska Department of Agriculture (NDA) to implement the FIFRA certification and enforcement program and to coordinate preparation of pesticide SMPs.

Certification. UNL Extension will continue to provide applicator certification training. Certification will be conducted by NDA (when EPA approves the NDA applicator certification program) and will be for three years. EPA approval is expected soon.

Records. Dealers are now required to keep records of restricted use pesticide (RUP) sales for three years. Applicator records of RUP application must also be kept for three years. NDA can also require records of general use pesticide application.

Fees. Pesticide registration fees are a minimum of $100 and may be raised by NDA up to $150 per product per year. Dealer license fees are $50 and may be raised by NDA up to $100 per year. Commercial application license fees are a minimum of $10 and may be raised by NDA up to $25 per year. There is no fee for private and non-commercial licenses.

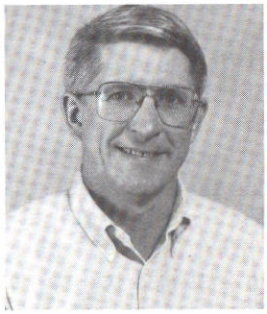
State limited use pesticide regulations. Under LB588, NDA may designate pesticides as state limited use pesticides (SLUPs) and regulate their use either in designated areas or statewide. SLUP may be designated if NDA determines that the pesticide 1) poses a threat to human health and/or the environment; 2) if the Department of Environmental Quality (DEQ) or Nebraska Department of Health (NDH) water quality standards (discussed below) are violated; or 3) if pesticide use restrictions beyond label directions are needed to meet state or federal pesticide restrictions. NDA may limit or prohibit SLUP use, again either statewide or in problem areas. For example, this means that NDA could ban the use of atrazine in the Platte valley if atrazine levels violated DEQ water quality standards or NDH drinking water standards. Atrazine use could be banned in contaminated areas, or could be restricted. Atrazine use could also be limited or banned in areas vulnerable to contamination (but not yet contaminated).

State Pesticide Management Plan (SMP). NDA can prepare a SMP regulating pesticide use to protect surface and groundwater from pesticide use. DEQ establishes standards for pesticide levels in surface and groundwater and NDH establishes standards for pesticide levels in drinking water. These standards will serve as "action levels" which, when reached, will trigger prevention and mitigation SMP regulations. The DEQ and NDH action levels may be less than the EPA drinking water standard. For example, the atrazine drinking water standards is three parts per million (ppm). If DEQ uses a 50 percent trigger for pesticides, atrazine readings of 1.5 ppm could lead to restrictions or prohibitions of atrazine use to keep contamination levels below the three ppm drinking water standard. NDA must cooperate with natural resource districts in implementing SMP pesticide regulations.

Future implications. LB588 is comprehensive and progressive state pesticide regulation legislation. NDA can regulate pesticide use to prevent contamination through the SMP. DEQ action levels, which presumably will be set below the drinking water standards, will force regulation to prevent pesticide contamination levels from violating drinking water standards. SMP regulations could be established on a problem area basis or statewide, as conditions warranted. SMP authorities could be extended in future legislation to also address nitrate contamination from fertilizer use.

Implications of Environmental Compliance On the Retail Fertilizer and Ag Chemical Industry

Michael S. Turner



Keith Volker

Michael S. Turner and Keith Volker

The 1990s might be described as the era of social consciousness; at least from the perspective of Nebraska agribusiness retailers. The reality of secondary containment requirements for spill control at retail fertilizer plants will apply to all new construction by July 1994 (the results of state and federal regulations). Requirements for existing facilities must be completed by January 1999. Compliance requirements for bulk pesticide storage occurs even sooner.

In one sense these requirements are like new technology. They will redefine the competitive structure of the industry. In another way they are very different than most technological change. First of all, compliance is not a matter of choice. It's mandated by law and will be required for continued operation. In the second place, compliance will not result in lower cost and/or higher profits. Compliance is not a business investment; it is an added cost of remaining in business.

In brief, compliance requires diking of liquid (fertilizer and chemical) storage and handling facilities, including self-draining concrete pads where receiving and application vehicles are unloaded, loaded, and rinsed. It represents a social cost which is to be assumed by the fertilizer and ag chemical industry; ultimately including the final consumer of these products—agricultural producers.

It is inappropriate to generalize about the direct investment cost of compliance to an individual dealer. Presumably an existing plant site could be diked by removing existing tanks and related storage facilities and later reinstalling this equipment on the same site. But from a practical perspective, many dealers will elect to relocate their fertilizer and ag chemical facilities on a new site outside municipal boundaries, further increasing investment cost. Some of the existing assets may be transferrable to the new location while others will have zero salvage value. Finally, the cost will be a function of the capacity of the plant. As a result, it is impossible to put a definitive price tag on compliance. A modest expenditure would be in the range of $250,000 to $350,000 per installation. It could also be as much as $1 million or more for a larger, more automated installation.

The obvious strategy for managing the mandated capital investment is volume. Based on results of a recent study, a liquid plant with diking operating at 125 percent of capacity has a lower break-even margin than an identical plant without diking operating at designed capacity. Likewise, a plant without diking operating at 80 percent of capacity has a higher break-even margin than a diked plant operating at designed capacity. For reasons described above, attention should be focused on differences in margins at alternative volumes and not on the absolute level of break-even margins.

While the conclusions are straight forward, the industry results are not. Additional fertilizer volume captured by aggressive dealers comes at the expense of competing retailers. This is further compounded by the increasing social emphasis

being placed on sustainable production practices which encourage smaller application rates for commercial fertilizer and ag chemicals. Finally, excess industry capacity is predictable. The collection of individual dealer decisions on compliance expenditures will be made in a competitive environment. The result will likely be too much capacity and too little product volume to make most efficient use of future retail capacity.

Industry Adjustments. Controlling volume will be essential for dealers who elect to make mandated capital investments. The traditional solution of acquiring trade territory through purchase of competitors' assets will have little merit. Assets will be obsolete by virtue of compliance regulations and the associated property has a reasonable probability of being contaminated. Joint ownership of new facilities is an option which dealers should consider. This approach has potential for appropriate utilization of new assets and cost sharing of the investment among two or more dealers. Smaller dealers and/or elderly owners may opt to pursue other business opportunities. A redirection of emphasis to soil testing, irrigation scheduling, and crop scouting may be alternative means of generating income in some cases.

Pathogens in the U.S. Food Supply

Richard K. Perrin

The 1993 outbreak of *E. coli* infection in the northwest focused public attention on the problem of pathogenic bacteria in the nation's meat supply. But *E. coli* is not the only, nor even the most significant, of foodborne diseases. The USDA recently estimated (Table I) the total annual cost of foodborne illnesses, including medical costs and lost productivity, at about $6 billion. This amounts to an average of about $25 per resident, or about $1500 per person affected.

While these estimates are not very precise, they probably underestimate the true cost of these illnesses because most of us would be willing to pay more to avoid an illness than its actual dollar cost to us. In fact, recent economic studies suggest that on the average, people might be willing to pay as much as 70 cents more for a pathogen-free fast-food sandwich as compared to a standard one, and this would translate to a good deal more than $25 per person per year.

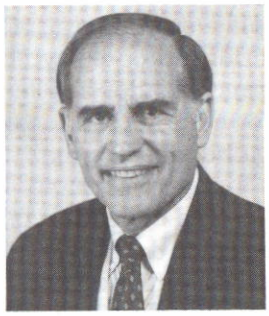
Table 1. Estimated annual dollar cost from foodborne pathogens in the U.S.

Pathogen	*Cost in $ billion*
Toxoplasma	2.7
Salmonella	1.3 - 1.7
Campylobacter	1.1 - 1.2
E. coli O157:H7	.2 - .6
Listeria	.2
Total	$5.5 - 6.4

About one-fourth of foodborne pathogen outbreaks for which sources have been identified have been attributed to dairy products, about one in six were from poultry, one in six from beef, and one in 10 from seafood, pork, produce or eggs. The problem of foodborne diseases is then of concern to Nebraska food producers and processors, as well as consumers who ultimately bear the cost.

What can be done, and what is being done, to reduce this problem? Improved education, improved inspection systems and improved technologies all have a role. Proper cooking and handling at the consumer/restaurant level can eliminate nearly all risks from foodborne pathogens. Safe handling educational labels are, therefore, in the process of being required on all meat and poultry product packages.

Another solution, obvious to many, is tighter inspections of processing facilities. USDA's Food Safety Inspection Service has recently announced a number of measures to this end. However, meat safety inspection still depends largely on the eye, nose and experience of the inspector because rapid quantitative testing techniques are either not yet developed or are expensive. New private and public research efforts are now aimed at discovering rapid and inexpensive screening techniques.

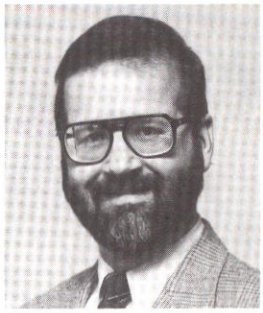


Richard K. Perrin

At the food processing level, both new procedures and new technologies are being developed. Industry and universities have been cooperating to develop HACCP (Hazard Analysis Critical Control Points) and TQM (Total Quality Management) procedures that will be cost-effective in identifying and correcting sanitation problems. Low-dosage irradiation of meats kills virtually all pathogenic bacteria without otherwise affecting taste or quality, at ultimate costs of around a penny per pound. It was not until 1992 that irradiation was approved for this purpose in the U.S., however, and only late in 1993 did the first irradiated poultry begin to become available. Also, techniques such as the carcass-rinsing technology developed in Nebraska can substantially reduce pathogens present at particular stages of processing, at very low cost.

While many of the pathogens originate at the farm production level, few technologies have yet been developed that promise to reduce those sources in a cost-effective manner. Given the level of public concern, and the number of research efforts underway, it is almost certain that low cost safety-related changes will soon be adopted and occur at every level of meat production and processing.

Limited Liability Companies and Initiative 300



J. David Aiken

J. David Aiken

Article 7, Section 8 of the Nebraska Constitution (popularly known as Initiative 300) generally prohibits 1) non-family farm corporations and 2) non-family farm limited partnerships from owning or operating agricultural land in Nebraska and from owning livestock. Legislative Bill 121, adopted in 1993, authorizes a new form of business organization—the limited liability company—which is a cross between a corporation and a partnership. Initiative 300 does not prohibit these limited liability companies (LLCs) from engaging in agricultural production because LLCs did not exist in Nebraska when Initiative 300 was adopted in 1982. But LB121, Section 2 does prohibit LLCs from engaging in agricultural production. However, LB121 is a statute not a constitutional provision, and can be amended by a later statutes. Thus LB121 could be amended to authorize LLCs to engage in agriculture notwithstanding Initiative 300.

LLCs are similar to corporations in that the owners/investors receive limited liability; i.e. in most circumstances the owners or investors are not liable for LLC debts beyond what they have already invested in the LLC business. LLCs are different from corporations, however, in that most of the corporate legal formalities need not be followed to retain the advantage of limited liability. Corporate shareholder meetings, board of director elections, corporate officer elections, board meetings, and minutes thereof are not required for LLCs as they are for corporations. Thus LLCs have much simpler organizational and operational requirements than corporations.

From a tax standpoint LLCs are treated as partnerships. This means there is no double taxation of business income as occurs in a regular corporation. In a regular subchapter C corporation, income is taxed to the corporation. If dividends are paid out to shareholders they must pay income tax again on the dividends—a second tax on the same corporate income. LLC itself pays no income tax; the income is passed through directly to the LLC members. This avoids the double taxation of a regular corporation, similarly to the tax treatment of a partnership or of a subchapter S corporation.

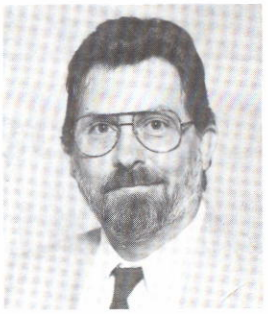
Aside from the Initiative 300 limitation, LLCs would provide an attractive business organization option to many farmers and ranchers: providing most of the legal benefits of incorporation without the legal inconveniences. Some states with corporate farming restrictions similar to Initiative 300 have authorized the creation of "family-farmer LLCs" to allow farmers to enjoy the organizational efficiencies of LLCs over corporations without compromising the state's corporate farming policies.

Look for future legislative debates regarding 1) whether family-farm LLCs should be authorized in Nebraska, and 2) whether repealing altogether the LB121, Section 2 Initiative 300 prohibition on agricultural LLCs should be appealed to allow non-family farm corporations and investors to engage in agricultural operations through LLCs despite Initiative 300.

For more information on LLCs, contact the Bureau of Business Research, College of Business Administration, University of Nebraska, Lincoln NE 68588-0406, (402) 472-2234, for a copy of the September 1993 issue of *Business in Nebraska*.

Community Change in Nebraska

John C. Allen



John C. Allen

The last 20 years have seen Nebraska face a number of challenges. The number of citizens living in rural areas has declined. The farm crisis of the 1980s took its toll by reducing the number of farmers working the land, and new environmental regulations for farmers and communities are presenting new and formidable challenges for Nebraska communities. How rural communities are responding to these changes presents some interesting potential to envision tomorrow's communities.

In other regions of the country where agriculture plays a major role in the economic well-being of the state, poverty has been increasing at dramatic rates. Yet, in Nebraska we are seeing a mixed picture. Some of our more rural counties have actually seen a decline in the number of persons living below the poverty level since 1980, i.e. an increase in the number living above the percent level. Examples include: Greeley, Hooker, Logan, Gosper, Polk, Nance, Dundy, Morrill and Cedar counties, which all had a decline in the number of persons living below the poverty level by over 40 percent in the last decade; while other counties such as Cherry, McPherson, Box Butte, Hall and Thomas all had over a 40 percent increase in the number of people living below the poverty level during the same period of time.

Available employment in many of our most rural counties has also declined during the last decade. According to state employment figures, the number of employed individuals declined by at least 20 percent in Banner, Hooker, Blaine, and Hayes counties between 1980 and 1990. The number of businesses in rural counties has also declined between 1980 and 1990. Although between the years of 1970 and 1990, all counties in the state had at least a 64.7 percent increase in the number of businesses reporting sales. This increase often outweighs the decline between 1980 to 1990 in some counties.

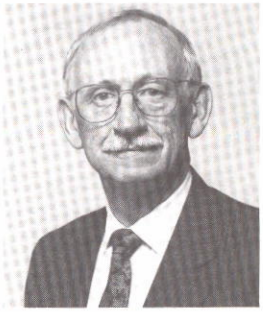
Along with the structural changes taking place among the economic sectors, changes in the ethnic make-up of our communities is also taking place. For example, between 1980 and 1990, eight counties in the state had at least a 50 percent increase in Hispanic residents. Although the percentage increase was often large, the previous number of Hispanic or Mexican Americans was small which makes even a few new residents to the county influence the percentage change.

How are Nebraska communities responding to these and other changes? Communities are reacting at a local level and at a more regional level. At the local-level, we are seeing a focus on facilitating more local entrepreneurial activity, such as home-based businesses and expanding local business markets in all communities. Programs directed at everything from craft marketing to industrial development are taking place across the state. At the regional level, community collaboration is again in the forefront of economic models. Communities are taking it upon themselves to cross boundaries and work with neighboring communities to expand markets and create jobs. State agencies are also becoming more involved as state and federal dollars decline to support social services for the disadvantaged, especially in our most rural communities.

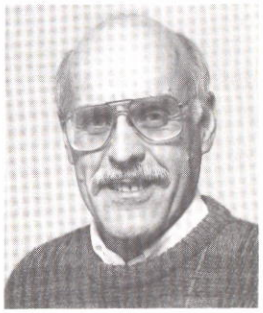
As the 1990s progress, we are likely to see a mixed bag of successes and failures among our rural communities as some act in response to the changes that are taking place and others react to those same influences.

Locally Directed Rural Economic Development Experiences

Duane A. Olsen and Bruce Johnson



Duane A. Olsen



Bruce Johnson

A recent study addresses the frustration of rural community leaders in identifying and accessing external sources of assistance. The underlying assumption was that "who you know" is important to total economic development. However, local leaders' frustrations could not be investigated without a clear understanding of their organization, goals, investments, leadership and expected results. This study also inventories their collaboration and networking experiences.

Telephone surveys focused upon Nebraska communities in four population classes. The smallest includes communities from 1,000 to 2,499 and the largest communities from 10,000 to 50,000 population. Respondents were local economic or community development leaders. In the initial 1988 survey, data were collected from 80 communities, and in 1993 a second survey obtained information from 59 community representatives.

Organized economic development efforts are the rule, not an exception, even for the smallest rural communities. Among small communities, between 1,000 and 2,500 population, just 13 percent reported no such organization in 1993. For all other communities such organizations have been established and goals identified by 1988.

Funds to support their economic development efforts had been raised in all but two of the communities above 5,000 population in 1988. While only one-third of the smaller communities were funded in 1988, by 1993 three out of four had obtained financial support. In the five years, between the two surveys the number of salaried, full-time economic development staff members employed by these communities doubled. The increases occurred primarily in communities below 5,000 population.

Community leaders described expected results and listed their current projects. The primary economic development strategies addressed were the recruitment of new firms, the retention and expansion of existing firms, the establishment of new businesses and other community improvements. Table I, which describes their current development projects, reveals the diverse community development interests these local groups have addressed.

The "internal connections" reflect the participation and support of local leaders from business, professional and government. While agricultural representation increased from 1988 to 1993, few representatives of labor, or people likely to seek the jobs to be created, are obvious. The importance of keeping up-to-date was widely recognized. About 60 percent of these volunteer leaders had attended economic development seminars or workshops. Their participation in these workshops or conferences, as well as memberships in allied networks, provide them with information about emerging concepts, and other sources of assistance.

The examination of the "external connections" confirms the advantages of size. Representatives from communities with 1,000 to 2,499 population submitted two annual requests for assistance, while seven requests per year from communities in the largest population class were reported.

The sources of external assistance these representative have identified has produced a long list. Their requests were

presented to more than 25 different national, state, regional or community and private agencies, institutions, organizations and special leaders. Further, casual inspection reveals many other "external connections" that were overlooked. The number as well as the diversity of assistance provided by these "external connections" points to the importance of networking and collaboration to differentiate, coordinate and ensure the effective utilization of these resources.

Table I. Current Community Economic Development Projects

Development Interests:	*No. of Communities*
Business establishment and expansion	36
Community improvements	35
Business and industry assistance	26
Housing	22
Business and industry recruiting	22
Tourism	10
Health	7
Miscellaneous	13

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